RAILWAY AGE

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FEBRUARY 11, 1952

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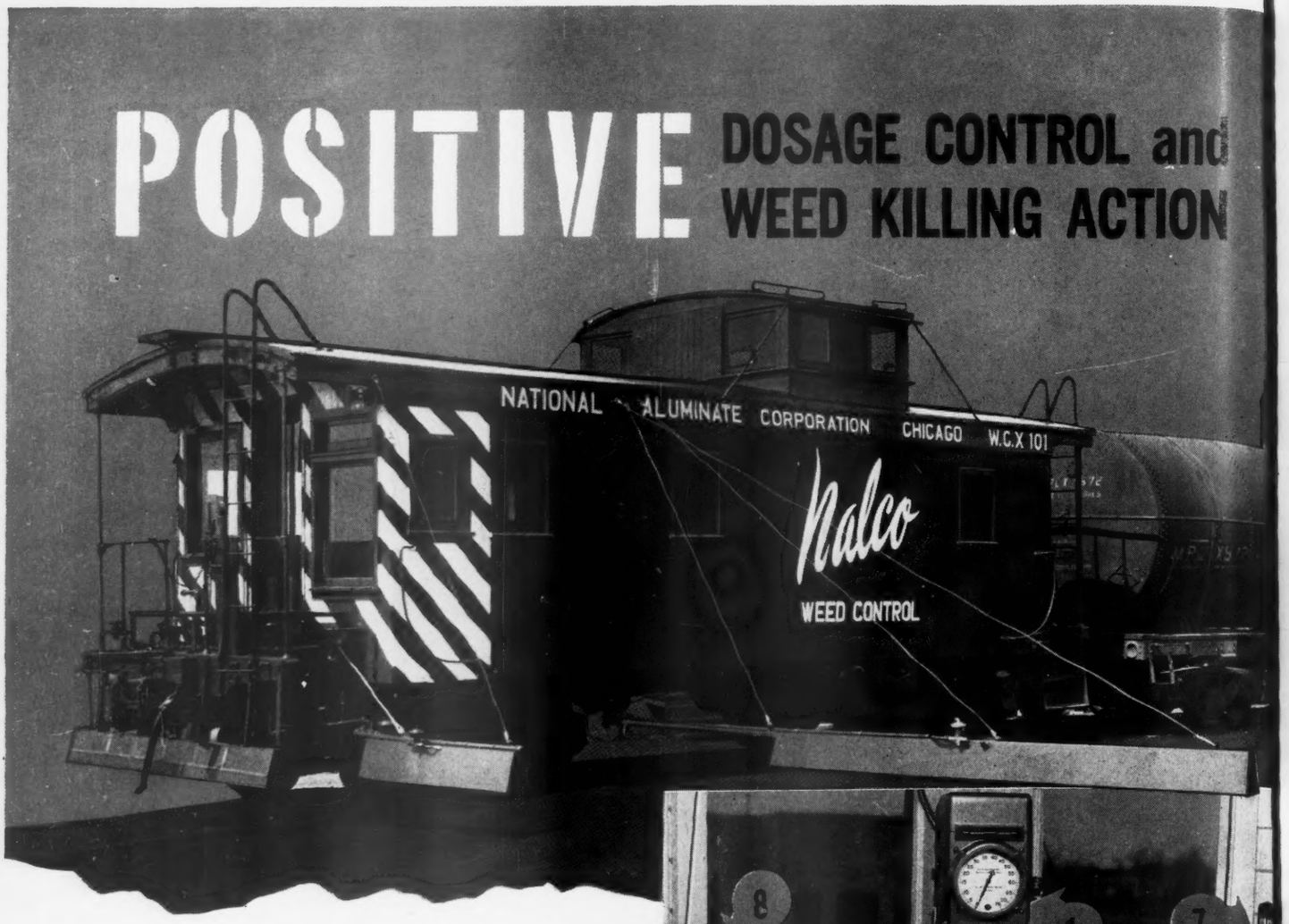

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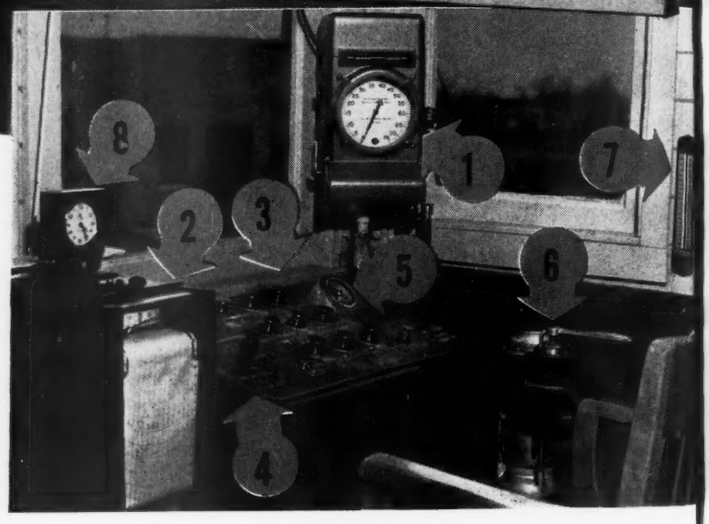

Top illustration shows Nalco Weed Control Car, with three-bank, 22-feet-wide sprays, and an additional 13-foot side spray boom for sidings. Lower photo shows operating controls of Spray Car. 1 Recording speedometer, 2 Recording H-170 flow meter, 3 Nozzle bank control valves for pinpoint spraying accuracy, 4 Left-side spray boom control, 5 Spray manifold pressure gauge, 6 Nalco Meter-Chem main control valve 7 Indoor-outdoor thermometers, 8 Timing clock. Not shown are intercommunicating telephone equipment for direct contact between Nalco Spray Car and work train locomotive, and direct-connected 50-foot auxiliary hose reel and spray nozzles for off-track spraying.

THE *Nalco* SYSTEM • Serving Railroads through Practical Applied Science

Vol. 132. No. 6 February 11, 1952

RAILWAY AGE

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Published weekly by the Simmons-Boardman Publishing Corporation at Orange, Conn., and entered as second class matter at Orange, Conn., price, $3.00 a year to railroad employees only in U. S., U. S. possessions and Canada, payable in advance and postage free. Subscription price to railroad employees elsewhere in the Western Hemisphere, $10.00 a year; in other countries, $15.00 a year. Two-year subscriptions double the one-year rate. Single copies 50¢, except special issues $1. Address Robert G. Lewis, Assistant to President, 30 Church Street, New York 7.

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Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 79 West Monroe Street, Chicago 3, Ill. Washington 4, D. C.: 1081 National Press Building—Cleveland 13: Terminal Tower—Portland 5, Ore.: Terminal Sales Building—Los Angeles 17: 1127 Wilshire Boulevard—San Francisco 4: 1204 Russ Building—Dallas 4: 2909 Maple Avenue.

Published by SIMMONS-BOARDMAN PUBLISHING CORPORATION, New York 7

Railway Age Railway Mechanical & Electrical Engineer Railway Engineering & Maintenance
Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia
Railway Engineering & Maintenance Cyclopedia American Builder
Marine Engineering & Shipping Review Marine Catalog & Buyers' Directory
Books covering transportation and building

Railway Age is a member of Associated Business Publications (A. B. P.) and Audit Bureau of Circulation (A. B. C.) and is indexed by the Industrial Arts Index and by the Engineering Index Service. Printed in U. S. A.

You'll get SAVINGS IN STOPS and TRAIN TIME WITH "UNION" INTERLOCKING

Notes from the Records*

RAILROAD A Average Trains Daily—53 • Train Time Saved Daily—404 minutes • (Passenger—54 minutes—Freight—350 minutes)

RAILROAD B Average Trains Daily—50 (Including 20 switching movements) • Train Time Saved Daily—626 minutes • (Passenger—36 minutes—Freight—390 minutes—Switching Movements—200 minutes)

RAILROAD C Average Trains Daily—31 • Train Time Saved Daily—282 minutes • (Passenger—12 minutes—Freight—270 minutes)

*Additional factual data will be supplied on request.

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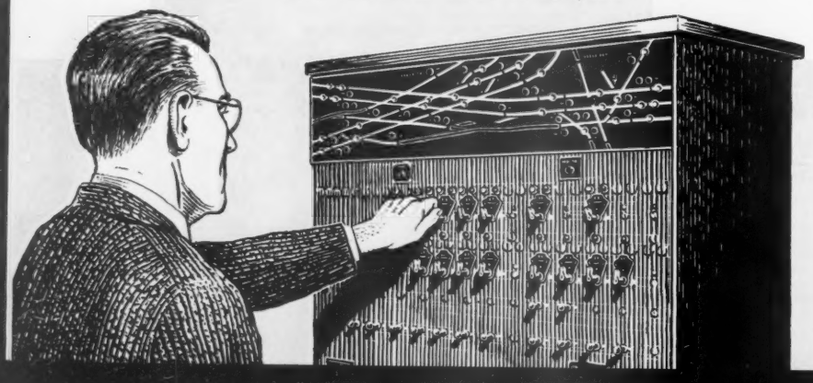
1—Freight Train Time Saved.	$73,730.00
2—Train Stops Eliminated . .	27,500.00
3—Miscellaneous	11,500.00
GROSS SAVINGS. . . .	$112,730.00
NET SAVINGS	$104,998.00



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WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, eleven months
1951 ..... $ 9,487,977,087
1950 8,545,280,558

Operating expenses, eleven months
1951 7,392,178,948
1950 6,413,820,619

Taxes, ten months
1951 1,101,000,143
1950 1,041,182,757

Net railway operating income, eleven months
1951 807,862,943
1950 925,024,752

Net income, estimated, eleven months
1951 543,000,000
1950 662,000,000

Average price railroad stocks
February 5, 1952 ..... 55.92
February 6, 1951 ..... 60.79

Car loadings, revenue freight
Four weeks, 1952 2,828,319
Four weeks, 1951 3,009,358

Average daily freight car surplus
February 2, 1952 7,106
February 3, 1951 3,568

Average daily freight car shortage
February 2, 1952 4,387
February 3, 1951 23,254

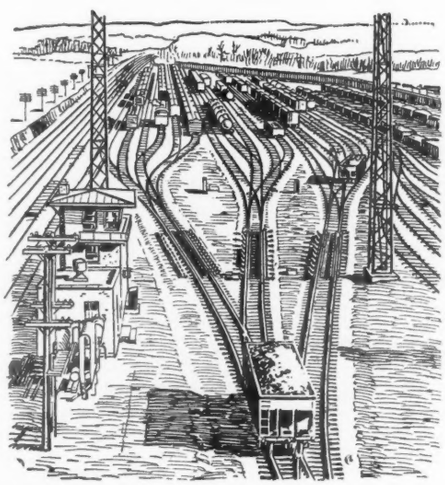
Freight cars delivered
December 1951 8,458
December 1950 5,700

Freight cars on order
anuary 1, 1952 123,947
January 1, 1951 124,489

Freight cars held for repairs
January 1, 1952 95,425
January 1, 1951 93,840

Net ton-miles per serviceable car per day
November 1951 (preliminary) 1,035
November 1950 1,017

Average number railroad employees
Mid-December 1951 1,243,095
Mid-December 1950 1,277,119



In This Issue . . .

NEWS DEVELOPMENTS covered by this issue include a $3.5-million construction program for the Indiana Harbor Belt; a number of orders, by different railroads, for signaling installations; application to a federal court for approval of proposed contracts for sale of the New York, Ontario & Western; announcement by the New Haven that it will achieve full diesel (and electric) operation in April; decision by the N.Y.C. to employ an outside consulting firm in an analysis of its passenger operations; an encouraging finding, by the Midwest Shippers Advisory Board, of improvement in l.c.l. service, at least between larger cities; and purchase by General American of the Union Oil Company's fleet of 600 tank cars.

THE OPENING ARTICLE OF A TIMELY SERIES on how to use Car Service Rules in such a way as to reduce car shortages and increase car efficiency begins on page 57. Its author is E. W. Coughlin, of the A.A.R.'s Car Service Division; it will be followed, in a March issue, by another discussion of some of the basic principles and preferred practices in freight car handling—a subject which is of special importance under present conditions of critical car supply.

THE FIRST PUBLICATION, for general railroad circulation, of a report on what may be a significant innovation in electric motive power for railroads—the two ignitron rectifier locomotives just built for the Pennsylvania by the Westinghouse Electric Corporation—appears on page 63. The locomotives are designed to take 11,000-volt a.c. current from an overhead trolley, converting it to use with direct current traction motors.

RECENT CHANGES in hours of service rules, wage scales, track maintenance equipment, etc., have brought with them great changes in the role of the railroad maintenance-of-way man. What some of these changes are, and how they are affecting the functions and importance of maintenance workers, are detailed by Max K. Ruppert, in the feature article which starts off on page 53.

In Washington . . .

AS THIS ISSUE WAS GOING TO PRESS, two speeches were being made—one at Washington and one at Boston—which are worthy of careful reading not only by railroad men but by anyone genuinely

concerned with the welfare of the transportation industry as a whole. At Washington, Senator Bricker, on February 6, told that city's Traffic Club that benefits accruing to one type of carrier from excessive regulation of another type are "pure illusion." At Boston, Fred Carpi, traffic vice-president of the Pennsylvania, told some 900 representatives of the oil industry that they must practice "self-control" if they would avoid undue "legislative control." He asserted, moreover, in no uncertain terms, that oil company support of demands, by a small minority of all truck operators, for larger load limits and costlier highways, with no contribution to that added cost, is not necessarily in the "best interests" of the petroleum industry. Both speeches are summarized in the news pages.

IN RELEASING its annual report, the I.C.C. made 11 recommendations for legislative action, some of which coincide closely with proposals embodied in bills on which the Senate Interstate and Foreign Commerce Committee will soon hold hearings. Most of the recommendations were, substantially, repetition of others made in previous years, but one called for repeal of the Standard Time Act.

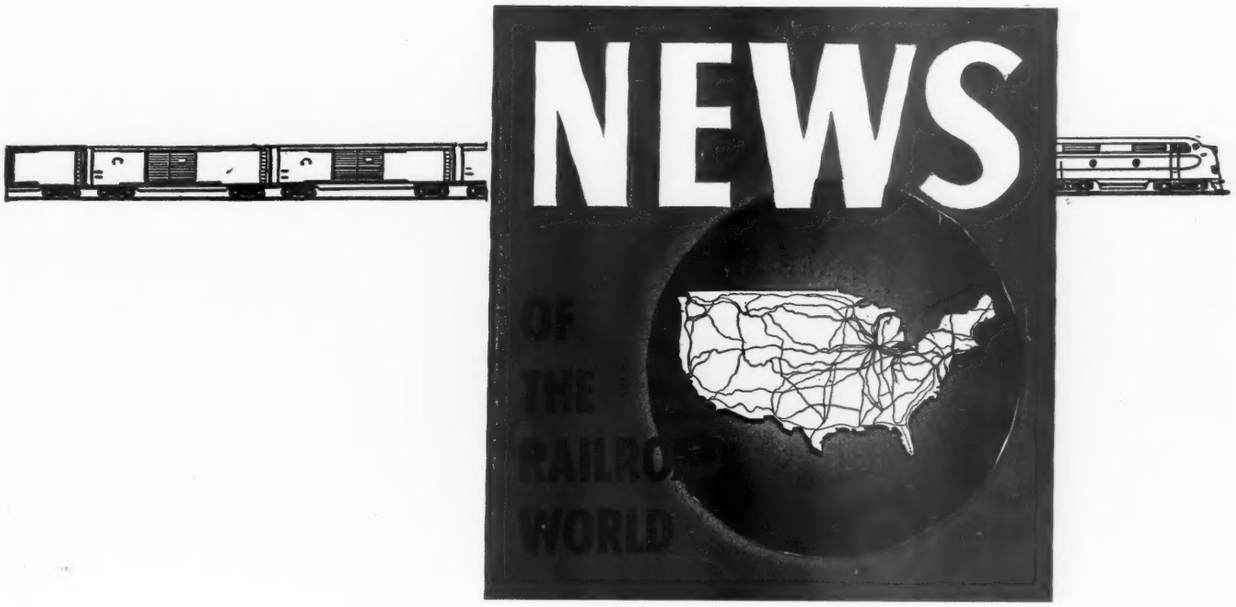
OTHER NEWS OF THE WEEK from the nation's capital: The Brotherhood of Locomotive Engineers' decision to take a strike vote among its members; announcement by the American University of plans for its sixth Rail Transportation Institute; Supreme Court affirmation of an I.C.C. decision on Illinois Central commuter fares; award of amortization certificates to 36 railroads; an I.C.C. order on New Orleans Union Terminal employee protection provisions.

HEADLINE NEWS in the railroad industry today—at least so far as mechanical and operating people are concerned—is the current pressing problem of hot boxes and how to solve it. An up-to-the-minute discussion of the subject by H. G. Moore (above), assistant general superintendent equipment of the Atlantic Coast Line (page 68), ties in closely with recent articles on the relative values of roller and plain bearings for freight cars.

THE NEXT FEW WEEKS are likely to produce intensified competition for the long-distance travel dollar, if the major air lines should decide to cut their air coach fares below the level of first-class rail fares. Subject to local variations, average air coach fares on the scheduled lines have been running around 4⅓ cents a mile, but there is talk of a four-cent fare on transcontinental flights, while a 3½-cent fare is reported to be shaping up between New York and Miami.

A NEW APPLICATION by Canadian railroads for higher freight rates, and a "decision soon" on policy with respect to truck competition, were among near future possibilities hinted at by Donald Gordon, president of the Canadian National, in a recent interview at Vancouver. Railway freight rates, Mr. Gordon said, have risen far less than other prices—a statement supported by excerpts quoted in the news pages from the Transport Board's recent decision allowing an additional 4½ per cent increase (*Railway Age*, February 4, page 16). "Truck competition," he added, "hits us where we are most vulnerable—high revenue traffic."

WHAT ARE AIR CARGO PLANES HAULING? Ranked according to weight, machines and machine parts have displaced cut flowers in the Number One traffic spot on United Air Lines planes for 1951. Electrical and electronic equipment, automotive parts and equipment, radios and radio parts, aircraft parts and accessories, wearing apparel, printed matter, general hardware and advertising display material follow cut flowers, in that order.



"Exercise Self-Control to Avoid Undue Legislative Control," Carpi Tells Oil Men

"Oil industry does not serve its own best interests" in supporting truckers' campaigns for heavier load limits and more expensive highways with no increase in taxes, P. R. R. executive declares in Boston speech; calls "unrestrained use" of giant trucks "dark cloud" in automotive transport outlook

Calling on the oil companies of America and their allied interests to exercise self-control to avoid undue legislative control, Fred Carpi, vice-president of the Pennsylvania—which also is one of the nation's largest truck operators—said "unrestrained use of giant trucks on the public highways is the dark cloud in an otherwise clear and bright outlook for automotive transportation."

Mr. Carpi told 900 businessmen at the annual meeting of the New England Oil Industry Information Committee at Boston on February 7 that the oil industry did not serve its own best interests when it supported the program of trucking associations advocating increased truck load limits and opposing increased truck taxes, despite rising clamor over damage done to public highways by heavy loads.

"There is, as yet, no realistic plan for meeting the tremendous costs of rebuilding and expanding the present highway system," he said, emphasizing the danger of the motor vehicle defeating its own purpose by choking arteries through which highway traffic must flow. "The number of big trucks is increasing, and their interference with the free flow of automobile and small truck traffic—and with safety and the tempers of motorists—is out of all proportion to their numbers."

"We believe," he continued, "that each form of transportation should be allowed to compete on an equal footing for the business it can serve to the best advantage. The original purpose of subsidies was to encourage development of a product or a service considered necessary to economic progress and the public welfare. But when subsidy is carried to such lengths that equally necessary and often more economical competitors are endangered, the question arises: what constitutes progress, and what, in the long run, benefits the public welfare?"

Urging the support of the oil men for measures which will lift "the heavy hand of subsidy and the stifling hand of government over-regulation from the living arteries of commerce and trade," Mr. Carpi asked their concurrence in "a sound national transportation policy that will provide equality of competition, without special favors."

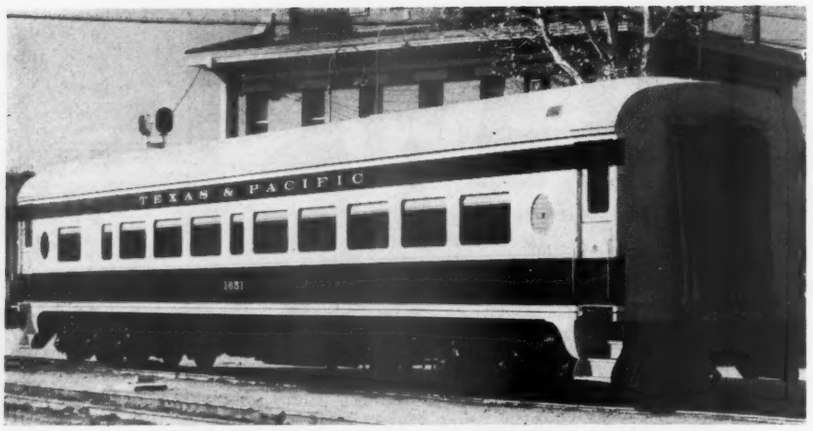
He added that he was sure of such support because the kind of competition he urged "is the very kind that has made your own industry great," and warned that "if the railroads, starved and weakened by inadequate profits and unable therefore to attract new capital, go farther down the road toward nationalization, other forms of transportation will go also and other industries as well."

Freedom vs. Restraint

Expressing "admiration" for the oil industry's "freedom to be competitive—to price your product to meet, or beat, the competition, and to make a fair profit," the P.R.R. officer declared that "in the railroad business we are denied a basic right of management—to adjust our prices so they have some realistic relation to our costs of doing business. That is only one of a number of restraints we live with," he added; and went on to say:

"The paramount purpose of my company and of the railroad business generally is the same as yours: To continue as a privately managed enterprise to serve the public to the best of our ability, and with the opportunity of earning a profit sufficient to enable us to expand and improve our services as needed, and to pay a fair return on our investment so as to attract the new equity capital we need. . . .

"What has happened in the case of railroads is the best example I know of what can happen in other industries when people seek . . . to substitute the manipulations of men and theories for the laws of free and fair competition in our economy. . . . There was a time when railroads held a virtual monopoly of intercity transportation. The regulatory methods then set up served a useful purpose. But today, when highways, airways, pipe lines and waterways criss-cross the nation, we are still proceeding as if railroads were a monop-



THE FIRST OF 15 COACHES modernized at the Marshall Shops of the Texas & Pacific. In each car the seating capacity has been cut from 66 to 52 and additional lounge and washroom space provided. Other changes include modified roof structure; new air conditioning equipment and heating controls; new luggage racks and lighting fixtures; type "H" tightlock couplers; aluminum breather window sash; remodeled vestibule and end doors; new 2½-inch steam trainline with 2½-inch end valves and steam conduits; and new exterior and interior color scheme matching that of the road's "Eagle" trains.

oly, subject to none of the laws of free competition. . . .

"There has been a rising clamor in recent years over damage done to roads and highways by excessively heavy trucks, and by overloading. Our present highways were not designed for the size, weight and numbers of the vehicles they now carry. Yet, in the face of evidence that heavy loads cause excessive damage, motor truck associations campaign persistently to increase weight limits still more.

"Who opposes them? Not railroads alone, I can assure you. In my state of Pennsylvania, the recent so-called 'Big Truck Bill,' which was vetoed by the governor, was opposed by highway engineers and officials, by automobile clubs, the state Grange, the United Mine Workers, the C.I.O. and many other groups, in addition to the railroads. It was supported by the Pennsylvania Motor Truck Association, the American Federation of Labor and, according to the newspapers, by the 'petroleum interests.'

"Study after study has shown that, on a ton-mile basis, heavy trucks do not pay their proportionate share of highway user taxes. An Illinois survey revealed that passenger cars were paying three times as much in motor fuel and license taxes per ton-mile as heavy vehicles paid. Yet it has been estimated that heavy vehicles may reasonably be held responsible for more than half the cost of constructing highways.

"There is a widespread demand by the automobile and allied industries that our highway system be rebuilt to meet present needs. Of course, much will have to be done—and the cost will be tremendous. There is as yet no realistic plan for meeting this cost. I question whether the truck associations are acting in their own best interests when they advocate higher load limits, with resulting damage to our present roads, and oppose bearing an increased share of highway user taxes.

"*Self-control* of highway transportation, so as to cause the least inconvenience to the public, is the best way to assure continued operation of trucks where they are best suited to the transportation task at hand."

I. C. C. Annual Report Includes Eleven Legislative Recommendations

Eleven legislative recommendations were included in the Interstate Commerce Commission's 65th annual report which went to Congress on February 6. Most of the recommendations were repeaters from previous annual reports or other commission presentations to Congress, but a call for repeal of the Standard Time Act marked an about-face on the part of the commission.

Its previous recommendations with respect to standard time have been to the effect that Congress should provide for "full occupancy" of that field by the federal government. Explaining its abandonment of that position, the commission said in part:

"In view of our repeated recommendations in this regard, the failure of Congress to broaden the scope of the Standard Time Act would appear to indicate a view that the initiative and final control in matters of standard time should rest with the local authorities as they were prior to the enactment of the Standard Time Act. So far as the railroads are concerned, we see no reason why they will not be able to arrange for safe and convenient standards of time having regard for their junction points and division points, as they did for 35 years prior to the enactment of the Standard Time Act.

"As for the convenience of commerce, we are unable to fix the boundaries of the zones which in our judgment best promote the convenience of commerce. We have no authority whatever to affect local observance, but find ourselves continually injected into violent and bitter local controversies concerning time, the only purpose of which is to have us use what little authority we have to make the federal standard conform to the local ordinance, which frequently is adopted without regard for the convenience of commerce of the area as a whole. . . ."

The 10 other legislative recommendations were set out in the report as follows:

1. That Section 1(15) of the Interstate Commerce Act be amended so as to authorize the commission thereunder to determine the compensation to be paid and other terms of any contract, agreement, or arrangement for the use of any locomotive, car or other vehicle not owned by the carrier using it and whether or not owned by another carrier.

2. That Section 20(6) . . . be amended to make it applicable to persons who furnish locomotives to carriers subject to Part 1 of the act.

3. That Section 20b . . . be amended so as to permit controlled or controlling stockholders of a railroad corporation which is undergoing voluntary modification or alteration under that section to register their assent to such modification or alteration, subject to the power of the commission to increase the prescribed percentage of assents required in such cases for approval of a proposed plan.

4. That Section 22 . . . be amended so as to enable the United States and the carriers to bargain as to rates on a firm and dependable basis.

5. That Section 25 . . . be amended by making it also applicable to telegraph, telephone, radio, inductive, or other wayside or train communication systems intended to promote safety of railroad operation.

6. That Part III of the act be amended by adding after Section 312 a new section (312a) containing provisions for revocation of water-carrier certificates or permits.

7. That Section 402(b) (2) be amended to terminate the exemption of freight forwarders of used household goods.

8. That Section 402(c) be amended to make the exemption of shippers' associations and shippers agents revocable by this commission where it is found that the operation under consideration is not that of a bona fide association or agent as defined in that section.

9. That Section 411 be amended to provide for regulation of consolidations, mergers, and acquisitions of control of freight forwarders.

10. Enactment of H. R. 5045, the object of which is to validate certain motor-carrier application proceedings before the commission, possibly without compliance with the hearing-examiner provisions of the Administrative Procedures Act.

The report, in the usual form, was a 152-page document covering commission activities from November 1, 1950, to October 31, 1951. A detailed review will appear in next week's issue.

Engineers Circulate Strike Ballots In Move to Further Wage-Rules Dispute

The Brotherhood of Locomotive Engineers is circulating strike ballots among its membership, in a move calculated to progress its long-pending wage-rules dispute with the railroads.

J. P. Shields, grand chief engineer, announced the action on February 1. Results of the balloting probably will not be known until around March 1, Mr. Shields said. He added that he has "no intention" of calling off engineers on all the railroads.

It would be "foolishness" to pull them all out at once, Mr. Shields said. But if the men vote in favor of a work stoppage, he said the union might select a few railroads—some "pretty important" ones—for strike action.

A possible outcome of the strike vote "could be" the appointment of an emergency board to investigate the dispute. Of the three operating brotherhoods now engaged in the wage-rules movement, only the Engineers have not had an emergency board.

Board Not Wanted

Mr. Shields said the union does "not particularly" want an emergency board. The B. L. E. is "not anxious to spend its time and money presenting its case before a board with convictions as obviously slanted as we believe the Firemen's board was when it made its recommendation.

This was a reference to an emergency board report made recently in the dispute involving the Brotherhood of Locomotive Firemen & Enginemen. That report, recommending "pattern" settlement of the Firemen's dispute has been rejected by that union (*Railway Age*, February 4, Page 11).

The strike-vote announcement by Mr. Shields came shortly after final breakdown of negotiations between the B. L. E. and the carriers. These sessions, which broke off in December, had resumed early in January at the request of the National Mediation Board.

Issues "Important"

As to reports that had been circulated that the Engineers were near a settlement, Mr. Shields said the union "can't imagine" where such reports originated. He did say they had come "closer, perhaps" than in the past, but the issues still in dispute were "very, very important."

"I think we could have come together on the matter of wages," Mr. Shields said. The parties could make no progress, however, on some of the proposed rules changes, especially the "carriers' proposed interdivisional run and more than one class of service rules."

This view was verified in a statement issued later that day by the three Carrier Conference Committees which have been working on the dispute.

The railroad spokesmen said certain rules changes proposed by the carriers appear to be the main road-block to a settlement. The rules changes are needed, they said, "to step up efficiency by taking advantage of the improvements that have been made in the railroad plant and equipment."

Refusal of the Engineers to arbitrate the few issues to which the dispute apparently had narrowed caused collapse of the settlement effort, the railroads said.

Mr. Shields did not agree on this point. Earlier, he had criticized the carrier arbitration proposal as being "most unusual," and labeled it a "heads I win, tails you lose" proposition. He said the roads sought a "hybrid form of arbitration" under which awards would be binding upon employees alone.

"Circulation of this strike ballot does not mean that the grand chief engineer and the national wage-rules committee intend to abandon all their efforts short of strike action to achieve justice for locomotive engineers," were the concluding words in the strike ballot notice to B. L. E. members. It said union representatives "will continue to explore every conceivable avenue and to exert all our efforts up to and, if necessary, following the fixing of a strike date or dates."

The strike ballot also contained a copy of a telegram which the Brotherhood sent President Truman last December, requesting an emergency board to hear the B. L. E. case. The request was later withdrawn, and conferences with the carriers resumed.

This came after the Mediation Board informally reported to the parties that the White House hoped one further and final intensive effort" would be made to reach settlement.

In the February 1 letter forwarding strike ballots to all B. L. E. general chairmen, Mr. Shields and his committee called for completion of the strike vote at the "earliest possible date." It said the union "must resort to more persuasive means," since it seems to

PIONEER DIESEL CLUB ON THE BALTIMORE & OHIO SYSTEM *has been organized by more than 150 mechanics and electricians at the railroad's Mt. Clare shops. "Reflecting a spontaneous interest in additional diesel locomotive maintenance training," the railroad says, the major purpose of the club is "to retrain men skilled in steam maintenance to become expert in diesel repairs." Meetings are to be held twice a month and will consist mainly of programs presented by diesel locomotive builders. The illustration shows club members watching film of the American Locomotive and General Electric Companies, illustrating a program on fundamentals of diesel engines.*

have "run out the string" of peaceful activity.

The letter said withdrawal of the December 22 request for an emergency board came when the B. L. E. learned definitely that the Firemen's board would make its report before the end of January. Having subsequently examined this report, the B. L. E. found that it contained "insufferable terms."

Carrier Gains from Inequitable Conditions Are "Pure Illusion," Senator Bricker Warns

"Advantages gained by one carrier at the expense of another through inequitable government treatment are pure illusion," Senator Bricker, Republican of Ohio, warned in a February 6 address at the forty-fifth annual dinner of the Traffic Club of Washington, D. C. The warning was preceded in the address by an expression of the senator's belief that "the time is fast approaching, if indeed it is not here, when all. . .with a stake in the transportation industry must join ranks to insure the well-being of the industry itself."

Senator Bricker is a member of the Senate committee on interstate and foreign commerce, and of the subcommittee which has been conducting transport studies. Last October he submitted to the Senate a "progress report" on those studies (*Railway Age*, October 29, 1951, page 11). Like that report, the senator's address recommended no change in the Interstate Commerce Act's declaration of national transportation policy.

Ills of the industry, the senator said, "are traceable directly. . .to a failure on the part of Congress and of the Interstate Commerce Commission to adhere to the principle of regulating in the public interest, and only in the public interest."

The "public interest," as Senator Bricker defined it, includes the interest of the carriers and the "thousands of investors," as well as the interest of the shipper. Federal regulation, he suggested, may have tended to give undue consideration to the shipper-interest factor.

As for carrier competition, Senator Bricker said there are "areas in the industry which, through government action or inaction, have been artifically sustained to the detriment of the public interest as well as the best interest of the industry itself." He also said that ills of each segment of the transport industry vary "with the degree of federal regulation" under which each is operated.

"It is perhaps a bitter commentary," the senator added, "to find that the protecting arm of federal regulation is bent in a stranglehold on many of the great carriers of the nation."

Noting that there has been much discussion "about unfairness and discrimination in federal regulation," Senator Bricker went on to assert that "discriminatory regulation is actually only a part of the greater problem"—that of "strengthening" the entire transport system.

He also referred to "concern over the financial plight of the rail carriers," which he said was evidenced by representatives of the trucking industry in statements to the Senate subcommittee.

"They realize, as students of transportation and government must realize," the senator said, "that a nation must not permit its railroads to reach financial collapse. The alternative to competent regulation of any transportation facility is nationalization, and if the railroads come under government ownership, the rest of our transportation industry will inevitably follow."

That agricultural interests are also "concerned," the senator continued, was made plain by the recent letter calling for a "modernized" transport policy, which H. D. Newsom, master of the National Grange, sent to President Gustav Metzman of the New York Central (*Railway Age*, January 21, page 14).

"I want to pay tribute to Mr. Newsom and to the National Grange for their courage in the face of the history of legislation in this field," Senator Bricker said.

WHAT'S THIS? WASHING FREIGHT CARS?—The Missouri Pacific decided that its blue and white "Eagle" merchandise service box cars should not be permitted to become dingy and weather-beaten on the *outside*—because it would have a bad influence on housekeeping on the *inside*. Accordingly, these cars get regular washings with a brush, detergent and water at seven key points on the system. It is possible to keep all cars in this service clean because they are not permitted off Missouri Pacific or affiliated Texas & Pacific rails.

Canada's St. Lawrence Plan Differs From That In Pact

The St. Lawrence project under consideration in Canada "differs materially as to navigation and power from that contemplated by the 1941 agreement," according to Walter J. Kelly, vice-president, Traffic Department, Association of American Railroads.

Mr. Kelly's statement was a supplement to his previous analyses and adverse reports on the project. He issued it, he said, "in view of recent statements in Congress and the President's message of January 28 urging United States participation . . . rather than have Canada proceed on its own."

The "1941 agreement" is the U. S.-Canada St. Lawrence pact now pending before Congress.

"The 1941 agreement," Mr. Kelly said, "contemplated construction of a 27-ft. navigation channel, partly using the existing channel . . . but leaving in existence unchanged the present 14-ft. canals already constructed by the Canadian government. In places the old and new canals, both of which would be maintained under the 1941 agreement, are little more than a mile

apart, and nowhere are they as much as 10 miles apart. In other words, the 1941 agreement contemplated the building of a 27-ft. channel in addition to maintaining the existing 14-ft. channel, together with the construction of certain power projects.

"Since the 1941 agreement was made, one of the most important of these power projects, that at the lower end of the new Beauharnois Canal, has been greatly enlarged, modernized and completed by the Province of Quebec. This then, is no longer a subject for future construction by anyone.

"Present Canadian intentions, as developed in addresses by the Minister of Transport and Minister of Trade, Commerce and Defense Production of Canada, appear to include no more than the construction of certain additional power works at Barnhart Island, a short canal around that power dam, and the subsequent deepening of the existing canals east of Cornwall in the Soulanges, Lake St. Francis and Lachine sections. In other words, what Canada now contemplates is not a unilateral execution of the 1941 agreement, but the construction of an entirely different plan, avoiding the anomaly of duplicate navigation facilities."

S.P. to Switch Over To "Book-type" Tickets

Beginning about April 1, agents of the Southern Pacific will discontinue issuance of conventional interline and local passenger tickets in favor of a book-type ticket similar to that already in use on the Union Pacific, the Milwaukee and the Western Pacific (*Railway Age*, July 30, 1951, page 26).

When the changeover is complete, the S.P. expects to drop some 238 interline and 110 local ticket forms and all of the rubber stamps, pasters, storage cabinets, punches and other agent's paraphenalia necessary to issue them. Only 13 different forms of the new ticket will be required to displace the many older ticket forms for all passenger sales except multiple-ride commutation business. For this purpose, card tickets presently used will be retained.

To assist agents and clerks through the transition period, a group of trained employees will travel from station to station explaining how the new ticket is issued.

O.P.S. Sets Ceiling Prices For Untreated Eastern Ties

Dollars-and-cents ceiling prices for producers' sales of standard dimension untreated railroad ties and switch ties cut from any species in the eastern part of the United States have been established by the Office of Price Stabilization.

The ceilings are set out in ceiling price regulation 123, which became effective February 1. They are at levels prevailing under the General Ceiling Price Regulation, except for some areas where prices were considered "abnormally low and out of line" when the general "freeze" became effective January 26, 1951.

Leasing Order Postponed

The Interstate Commerce Commission has postponed, from February 1 to April 1, the effective date of its order prescribing leasing rules for motor carriers. The motor carriers have gone to the courts in an effort to have the commission order nullified, and the order is being postponed while the courts hear the case (*Railway Age*, May 28, 1951, page 61).

I.C.C. Halts Rate War In Ex-Lake Grain Case

The Interstate Commerce Commission has suspended tariffs which were filed recently to publish new rate cuts being proposed by eastern railroads in their competition for the ex-lake grain traffic moving to Atlantic ports for export. The filing of the tariffs, which were scheduled to become effective March 3, was an aftermath of the Supreme Court's recent decision that vacated a commission order and thus permitted railroads serving New York, Albany, N. Y., Boston, Mass., and Portland, Me., to put ex-lake grain rates to those ports on parity with rates to Philadelphia and Baltimore.

The parity situation supplanted a differential set-up under which the rates to Philadelphia and Baltimore had been one-half cent per 100 lb. below those to the North Atlantic ports. The tariffs now suspended involve undertakings of the Philadelphia and Baltimore roads to reestablish the differential and counter proposals of the roads serving the northern ports to maintain the parity they won in the court case.

The tariffs were suspended until October 2, and the commission instituted an investigation of them in a proceeding docketed as I.&S. No. 5990. Meanwhile, it reopened for further hearing the case (I.&S. No. 5641) in which it issued the order that was vacated by the Supreme Court (*Railway Age*, February 4, page 94, and December 10, 1951, page 17).

I.C.C. Prescribes Employee Rights In Terminal Case

The Interstate Commerce Commission has found that railroad employees affected by the construction of the new Union Terminal at New Orleans, La., should be afforded, with some limitation, the protection of the so-called Washington Agreement of May 21, 1936.

This 1936 agreement was between almost all rail carriers and employee organizations. It established specific protection, ranging up to five years, for employees adversely affected, as in the New Orleans Terminal case, by consolidations, mergers, pools, or unifications.

General effect of the present I.C.C. ruling is to date this employee protection from the time an employee is actually dismissed or displaced, rather than from the effective date of the I.C.C. order approving construction of the New Orleans terminal.

Limitations to the original Washington Agreement, provided in the present order, include the following: The allowance provided for any dismissed employee shall be reduced to the extent that earnings from other employment, unemployment compensation, and his allowance exceed the amount on which this allowance is based.

The allowance is based on the average monthly earnings during the 12-month period prior to his dismissal. The original agreement would have reduced an employee's allowance only by what he earned in other railroad employment, but not otherwise.

This latest I.C.C. ruling is the second which the commission has made in the New Orleans case. A prior order, in 1948, authorized construction of the terminal and prescribed employee protection for a four-year period from the effective date of the order.

The Railway Labor Executive's Association sought reconsideration of the 1948 order. It contended that the period of employee protection should date from the time an employee is affected by the transaction, rather than from the effective date of the I.C.C. order.

Failing to obtain modification of the commission order, the labor group went to the courts, and, in a case that was finally decided by the Supreme Court, their view was upheld. The court said the four-year protection provision in section 5 (2) of the Interstate Commerce Act is not necessarily a statutory maximum for employee protection. The case went back to the I.C.C., and these latest findings resulted.

Transport Board Defends Canadian Rate Levels

Special to *Railway Age*

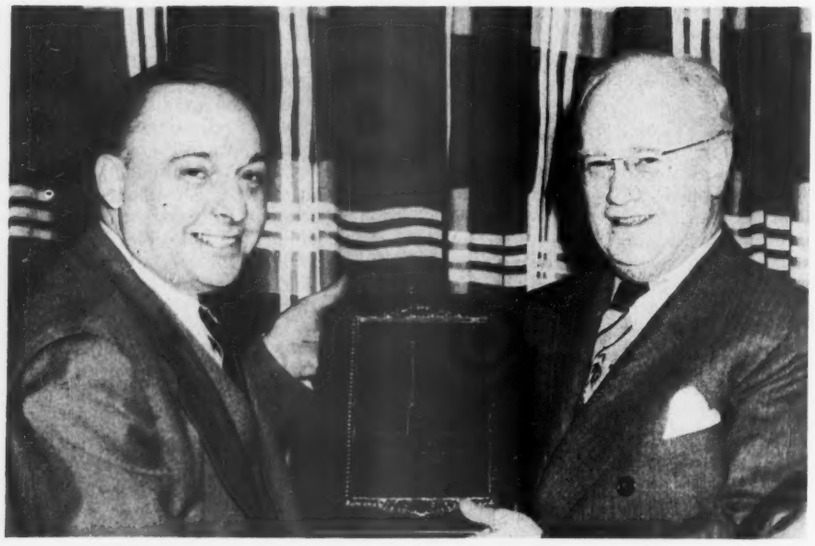
Positive assertions that "the price of railway transportation is not as far removed from 1939 levels" as other commodities; and that Canadian travelers and shippers are receiving "good value" for their transportation dollars, were included in the recent decision of the Board of Transport Commissioners authorizing Canadian railroads to make a temporary increase of about 4½ per cent in freight rates (*Railway Age*, February 4, page 16).

The decision, written by Chief Commissioner John D. Kearney, also found that a return on investment of approximately 4¼ per cent should be adequate for the major Canadian lines, on the basis of the Canadian Pacific's net investment in railway property of $1.1 billion.

The decision said in part:

"Based upon the evidence submitted in this and in previous cases, we have com-

RAILWAY AD MANAGERS ISSUE THEIR FIRST AWARDS



TO THE AMERICAN RAILWAY CAR INSTITUTE and to the American Car & Foundry Co. went plaques awarded by the Association of Railroad Advertising Managers for "an outstanding contribution through advertising toward a better public understanding of American railroads." The institute won first prize in the association's first annual advertising competition in the field of institutional advertising; the parallel award to A.C.F. was in the field of railroad traffic promotion. Albert W. Eckstein, left above, retiring president of the association and advertising manager of the Illinois Central, presented the institute's award to President C. W. Wright. The similar award to A.C.F. is shown in detail at the left. Honorable mention went to the Electro-Motive Division of General Motors Corporation in the traffic promotion field and to the General American Transportation Corporation in the institutional field. Contest judges were Fred W. Smart, transportation department, Northwestern University; Harold E. Green, midwest editor, Printer's Ink and John Howard, prominent Chicago artist.

AND ELECT NEW OFFICERS (seated, l. to r.)—Leo Brown, Wabash, vice-president; F. Q. Tredway, Southern Pacific, president; C. D. Dilley, Milwaukee, first vice-president; (standing)—C. D. Perrin, Poole Brothers, Inc. (formerly of the Burlington), assistant secretary; G. T. Sills, Denver & Rio Grande Western, treasurer; R. P. Schaeffer, Chicago & North Western, vice-president; and I. A. Coppe, of the Great Northern, who is secretary.

puted the amount which approximates, in our opinion, the net investment in railway property by the C.P. as of December 31, 1951. After making due allowance for any items which may be . . . open to question . . . the figure arrived at amounted to approximately $1,100,000,000. An earning requirement of $46,644,000 provides a return on the net investment . . . of approximately 4.25 per cent.

"Such a return is in the nature of the bare interest element of the present cost of money and approximates the return paid in today's market on high-grade bonds. It could be contended that the C.P. stands possessed of certain advantages in the present market whereby the existence of other assets and the income, both present and potential, produced thereby, provide the necessary attraction for the introduction of sums of new capital and in a substantial measure further ameliorate the risks to be encountered by such new capital.

"Reviewing the problem of Canadian railways as a whole and having in mind the very large part played therein by the Canadian National system, a return on capital of something in excess of 4 per cent might also be said to meet the requirements of the publicly owned railway. The capital requirements of the C.N. are raised upon the credit of the country and sums so invested in the provision of transportation facilities are subject to the same economic necessity of earning a rate of return sufficient to discharge the obligations incurred by such capital.

"The foregoing tests . . . are of more immediate concern to the directors and shareholders of the C.P. than to the rate paying public. They are in a large measure predicated on the assumption that the company is not overcapitalized and is efficiently managed.

Check on Efficiency

"A check on the economic efficiency of the corporation . . . may be provided by another test which directly concerns the public and may be readily understood, namely—what value does the public receive for the money it is required to expend on railway fares and tolls.

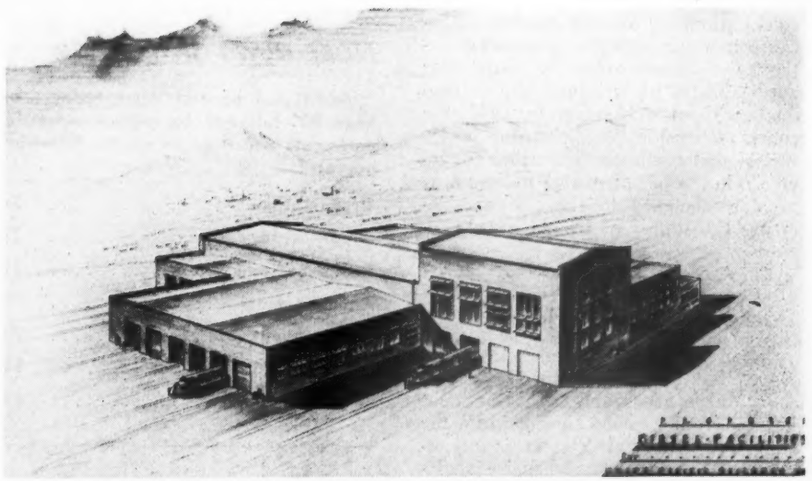
"Values are comparative and for comparison purposes railway transportation may be looked upon as a commodity which is purchased in the same manner as the various items which go to make up our cost of living index. The norms of such commodity values may be said to be price and quality. When the increase indicated in this judgment becomes effective it will mean that taking 1939 as a basis, those freight rates subject to the percentage increases will have risen approximately 70 per cent. In the same period the general living index has risen 91 per cent, thus compared with other commodities in our own country the cost or price of railway transportation is not as far removed from 1939 levels in terms of percentage increase. Passenger service is required of the railways although it is not remunerative yet passenger fares due to competition have risen considerably less than freight rates, and the traveling public are receiving correspondingly greater value.

"As a further test we might usefully compare the price or cost to the public of railway transportation in Canada with its counterpart abroad. Differences in exchange rates make it impractical to multiply comparisons but in terms of percentage increases I noted with the recent 10 per cent rise in freight rates which occurred in Great Britain they are now 99 per cent above the corresponding rates

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended February 2 were announced by the Association of American Railroads on February 7 as follows:

	Surplus	Shortage
Plain Box	604	2,041
Auto Box	573	0
Total Box	1,177	2,041
Gondola	222	1,323
Hopper	814	503
Stock	2,274	15
Covered Hopper	333	12
Flat	221	362
Refrigerator	1,785	108
Other	280	23
Total	7,106	4,387



THIS NEW SHOP which the Union Pacific has started to build at Salt Lake City will be used to repair both diesel and gas turbine locomotives. The main building shown in the sketch will be 410 feet long. Reinforced concrete and concrete and glass blocks will be used in the shop's construction, which is expected to cost in the neighborhood of $5.6 million.

in 1939 compared to 70 per cent in Canada. Prior to the war one dollar in Canada on the average purchased approximately 100 ton-miles of transportation service. Today the dollar will buy 75 ton-miles of service. When one realizes that in the United States on a comparable basis, one dollar in 1950 would purchase but 65 ton-miles, and American rates have been further increased in the meantime, it seems evident that the Canadian freight payer is receiving good value for his transportation dollar."

C. & E.I. Appeals I.C.C. Auto Rate Decision

An appeal against a decision of the Interstate Commerce Commission on rates for hauling new automobiles was filed on January 29 by the Chicago & Eastern Illinois in the federal district court in Indianapolis.

The I.C.C. decision, effective November 26, 1951, suspended a rate of 41 cents for new passenger automobiles from Evansville, Ind., to St. Louis, which had been in effect since March 12. Prior to that time the rate had been 62 cents.

The commission's ruling was based on the presumption that the C.&E.I. could not make a profit on the lower rate. This the road has denied, stating that it was making a profit at the lower rate because of operating efficiencies and use of modern equipment—specifically, diesel power.

In its appeal, the road stated that prior to March 1947, it served the auto plant exclusively. Subsequently, however, all but a few carloads of autos were handled by a motor carrier, and the auto manufacturer advised the road that its 62-cent rate would have to be lowered to meet motor competition.

The railroad told the court that unless the suspension is annulled, set aside or enjoined, all of the haulings of autos will go to the protestant motor carriers and freight cars specially equipped for this service will be reduced to idleness. It charged that the commission's orders "are arbitrary, capricious and beyond the power of the commission to make for the reason that they are unsupported by adequate and requisite findings. . . and lack of a rational basis."

In addition to asking for a reversal of the ruling, the C.&E.I. is also seeking a temporary injunction restraining the I.C.C. from putting its orders into effect while the appeal is pending.

G. A. T. C. Buys Tank-Car Fleet from Union Oil

The General American Transportation Corporation has purchased the tank-car fleet of the Union Oil Company of California, it has been announced by H. E. Coyl, vice-president of General American. The fleet, which includes about 600 tank cars of various sizes and types, will be operated by General American under lease to Union Oil.

Senate Committee Will Hold Hearings on Bills

The Senate Committee on Interstate and Foreign Commerce will begin public hearings March 3 on more than 20 bills which have been introduced in the Senate as a result of the committee's studies of domestic land and water transportation. This was announced February 4 by the committee's chairman, Senator Johnson, Democrat of Colorado.

The announcement put on the hearing calendar these bills: S. 2348 to S. 2366, inclusive; S. 1018; and S. 2518 and 2519. The 19 bills in the first group were introduced by Senator Johnson, while the last two on the list were introduced by Senator Bricker, Republican of Ohio, and Senator O'Conor, Democrat of Maryland, respectively (*Railway Age*, January 21, page 16, and February 4, page 14). S. 1018 had been introduced previously by Senator Case, Republican of South Dakota.

Since the bills were introduced, the committee has been receiving reports on them from the Interstate Commerce Commission. While they suggested a change of language here and there, the commission reports were generally favorable on S. 2350, which would authorize the commission to impose penalty per diem rates for the purpose of promoting efficient car service in time of car shortage; S. 2353, which would extend the records and reports provisions of the Interstate Commerce Act to persons furnishing locomotives; S. 2355, which would preclude filing by the government of complaints assailing as unreasonable any special non-tariff rates which carriers accord the government under section 22 of the act; S. 2356, a "radio-rules" bill which would broaden the act's so-called signal-inspection provisions by adding radio and other communication devices to facilities that the commission is empowered to require; and S. 2364, which would authorize the commission to revoke or amend, under certain conditions, water carrier certificates and permits.

S. 1018 is similar in purpose to S. 2350, but it proposes to deal with per diem rates by requiring the commission, in establishing such rates, to take into account the current replacement cost of the equipment. The bill would also strengthen the commission's emergency car-service powers.

The commission's report on this bill amounted to a recommendation that legislation along the lines of that subsequently embodied in S. 2350 be enacted instead. Meanwhile, the commission also said in that report that there might be some question as to the

constitutionality of such legislation, because it would give the commission authority to issue orders of particular applicability prescribing future conduct, without a hearing. In 1947, the courts set aside a commission order which undertook to prescribe an increase in the per diem rate to "promote greater efficiency in the use and increase the supply of freight cars."

N. Y. C. to Analyze Its Passenger Operations

In an effort to "increase passenger revenues, tailor service more closely to the public's needs and wishes and put it on a sound economic footing," the New York Central System is undertaking "the most comprehensive analysis of its passenger operations ever attempted," the Central's president, Gustav Metzman, announced on February 7.

The Central's management will be assisted in the project by Robert Heller & Associates, Inc., management consultant firm of Cleveland.

"We intend," Mr. Metzman said, "to look again into every phase of passenger service with a view to attracting a greater volume of traffic to our trains and also to eliminating the heavy losses which we, like most other railroads, now incur in passenger operations.

"We wish to insure that . . . we are rendering the best possible service to the public and doing it in the most efficient manner.

"With respect to losses suffered by the Central and other roads in passenger train operation, many factors complicate the picture, including special privileges granted to our competitors. But, within the realm of our own operations and policies, we are going to continue looking hard for ways to attract more business and to make passenger service pay."

Rock Island Buys E.M.D.'s Diesel Training Car

The "baggage car" of the former "Train of Tomorrow" has been purchased by the Chicago, Rock Island & Pacific for its training program on diesel operation and maintenance. The car was purchased from the Electro-Motive Division of General Motors Corporation.

Following sale of passenger cars of the experimental "Train of Tomorrow" to the Union Pacific in 1950, E.M.D. modified the baggage car for diesel instruction work and it has been used for this purpose on several roads.

F. R. Hosack, the Rock Island's general superintendent of motive power, said the car will be moved to locomotive maintenance centers throughout the system, and that classes will be held at each point on a five-week basis, covering practical aspects of diesel operation, repair and maintenance, as well as book and paper work.

MORE NEWS ON PAGE 72

Additional general news appears on page 72, followed by regular news departments which begin on the following pages:

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Temporarily the car will be staffed by an E.M.D. engineer, who will serve as instructor. Later, a member of Mr. Hosack's staff will take over on a full-time basis. In addition to cutaway equipment displays and samples of working locomotive parts, the car contains a small classroom and motion picture projection equipment.

Union Leaders Urge Traffic Promotion on N.Y.C.

In a special message distributed with pay checks, 79 representatives of labor organizations on the New York Central System are calling upon their members to help stimulate traffic on the railroad and thereby help make their jobs secure.

Pointing out that "railroads are facing very serious problems," the labor leaders urge Central employes to promote the shipping of freight by rail, to keep on the alert for new freight or passenger business and to practice courtesy and efficiency to maintain the business.

They note that much traffic has been lost to trucks, buses and planes because they "use facilities paid for by the taxpayers. This allows them to haul goods and people for much less than if they built and maintained their own facilities as railroads do. As a result they can charge less for some services than the railroads must charge in order to stay in business."

"This," the union leaders pointed out, "threatens railroad jobs. The number of people who can be kept on the payroll depends on the amount of business being done. If railroad employment is to be kept at a high level, traffic—both freight and passenger—must move in large volume."

High Court Affirms I. C. C. Order on Commuter Fares

The Supreme Court has upheld the validity of an Interstate Commerce Commission order prescribing higher fares for commuters on the Illinois Central at Chicago, Ill.

A per curiam decision handed down February 4 affirmed the findings of a lower court. The U. S. District Court for Northern Illinois had dismissed a complaint which sought to "suspend, enjoin, annul and set aside" the I.C.C. order.

The case dates from 1950. On grounds that existing round-trip, commutation, and multiple rate fares were a "burden" on interstate commerce, the Illinois Central asked the I.C.C. to approve higher fares. These were calculated to boost net revenues by about $2,000,000 a year. In July 1951, the commission approved the higher fares, "calculated on the basis proposed by the railroad but subject to certain maxima."

The Illinois Commerce Commission took the case to the District Court, alleging the I.C.C. order "exceeded the lawful authority and jurisdiction of that commission." The city of Chicago intervened in support of the state commission, charging the new fares were discriminatory against short-distance riders.

The district court heard the case and made its finding October 31, 1951. It denied the application for a permanent injunction and dismissed the complaint. The state commission then appealed to the Supreme Court.

Meanwhile, the higher commuter fares on the I.C. went into effect November 1, 1951.

Railroads Fined

A notice issued by Secretary W. P. Bartel of the Interstate Commerce Commission announced that on November 8, in federal court at Philadelphia, Pa., the Pennsylvania was fined $375 following a plea of *nolo contendere* to an information charging it with violation of the commission's explosives regulations.

"The information alleged that the explosives regulations were violated in the handling of a carload of explosives next to an engine in the carrier's Gray's Ferry Yard at Philadelphia," the Interstate Commerce Commission notice said.

The commission also has received information from U.S. Attorney Robertson, of St. Louis, to the effect that on January 3, 1952, in the U.S. District Court for the Eastern District of Missouri, a judgment was entered in favor of the government and against the carrier in the sum of $2,700 and costs in the case of *United States v. Chicago, Burlington & Quincy*.

Secretary Bartel released the information in a January 9 "memorandum for the press," which said: "The award was a civil penalty against the railroad for its failure to comply with the provisions of the commission's Service Order No. 869 which, to alleviate an existing shortage, prohibits the use of railroad refrigerator cars for transportation of non-perishable freight. The defendant had used such cars to transport green coffee in bags."

NEED FOR "FEDERALISM" IN RAILROAD PUBLIC RELATIONS WORK

The public relations program of the Association of American Railroads attained its fifteenth birthday not long ago, without the formal recognition which it merits. Prior to the adoption of this program, involving national advertising on a fairly large scale, the publicity activity of the association—and its predecessor organization, the American Railway Association—was modest almost to the point of non-existence. The A.A.R. program has been, and is, in the "big time"—hence it gets plenty of industry attention; and it is not surprising that not all opinion about it is favorable.

Friends and critics alike, within the industry, would do themselves a service if they would digest the recently issued 1951 annual report of the A.A.R. public relations department, wherein are outlined the department's current activities and those scheduled for 1952. While the list is of impressive size, it by no means exhausts all the public relations activities that urgently need to be carried on in behalf of the railroads. Most of the criticism which has been directed at the program arises from its failure to emphasize this or that activity that strikes some critic or another as vitally important, and probably is.

Individual Action Still Necessary

The situation is a good deal like that of the fellow who contributed a substantial check to the hospital fund in his community and was dismayed to find, on going to the hospital himself as a patient, that he still had to pay for his room. As valuable and necessary as association activity is—in the field of public health or railroading or what have you—it will seldom be found a complete and adequate substitute for all individual effort and individual expenditure. Railroad men do not expect the various technical divisions of the Association of American Railroads to do most or all of the work of the engineering, operating, mechanical and traffic departments on the individual railroads; and it is not realistic to expect the A.A.R. public relations department to do more than its proportionate share of the total public relations job.

Really comprehensive public relations activity is, of necessity, a function of the individual railroad—because the most important part of public relations consists of the public contacts of individual railroad employees. No association is or ever could be in a position to see to it that ticket and rate clerks and passenger train crews are well-informed, tactful and polite—yet securing that result, and the education of supervisory forces to this end, is the major part of public relations. The remainder consists of skilled handling of relations with the press, opinion leaders and political authorities; and it is only with a fraction of this remainder that an association could conceivably have any business.

How Aggressive to Be?

Aside from disappointment that the A.A.R. public relations effort isn't more comprehensive than it is, the principal criticism has been that the program is not aggressive enough. Somebody certainly needs to be aggressive in the railroads' behalf, but whether that duty devolves primarily on the national association rather than the individual railroads and the territorial associations is a question to which no offhand answer can be given.

What too many railroad men fail adequately to realize is that a majority of Americans no longer have any direct contact with the railroad industry. Most of them travel by automobile and, if they ship or receive any freight, it is unlikely that many of them know or care whether the truck which makes the pick-up and delivery does the line-haul job or not. In other words, a large part of 150 million Americans would find it pretty easy to forget the very existence of the railroads if it were not for mass-aimed advertising, such as the A.A.R.'s magazine series, its weekly radio program and its educational materials for use in the schools. If holding some degree of mass interest is important—and who can doubt that it is—the question immediately arises as to how much controversial economic argument could be injected into programs aimed at mass audiences, without the prospect of losing a large part of these audiences.

No job in the realm of railroad public relations is

more important or more pressing right now than that of awakening the business community—and especially those who use and need railroad service—to a lively concern for the adequacy of railroad earnings, and to support of the steps necessary to secure such earnings. This subject is obviously too complex to attract interest at all levels of a popular audience. But to say that a specialized educational effort among a limited number of key people needs doing is certainly not equivalent to saying that only the A.A.R. should undertake this particular job, or to disparaging what the A.A.R. has been doing to win as much friendly feeling as possible among mass audiences.

The task of making active friends and, at least, holding the passive ones for the railroads is the biggest single job confronting management—and the passive friends *en masse* won't do much good unless active friends in key places can be induced to assert the leadership needed to loosen the halter of regulation, and ease the impact of political favors to the competition. This paper sincerely hopes the A.A.R. and the individual railroads won't lose interest in the A.A.R.'s mass-aimed programs, just because the signs now call so strongly for intensive educational effort among opinion leaders, especially those of the business and traffic community.

The source of all health in public relations begins with the activity and understanding of the individual railroad—just as, in government, political health has its origin in the local community. Satisfactory results will not be obtained in railroad public relations by passing all or most of the job along to Washington. Unlike the governmental analogy, moreover, nobody has criticized Washington activity in railroad public relations for being too aggressive. There is no problem of "empire building" involved.

But there is a definite place for collective activity on a nationwide scale. The task is big and involved enough to call for a division of effort and responsibility along the lines of a sound federalism—with the individual companies, territorial associations and the national set-up each assuming that part of the burden to which its situation is inherently best adapted. Constructive thought toward such logical division of labor on the "federalism" principle should be profitable—as an economizer of time and money, and to obviate occasion for friction. Of *inherent* causes for friction, none exists.

ELECTRIFICATION OUTLOOK

In considerable measure it was what wasn't said that gave significance to the meeting of the Land Transportation Committee at the recent Winter General Meeting of the American Institute of Electrical Engineers in New York, January 21-25.

In two addresses, H. F. Brown, consultant of Westinghouse International Company, and J. C. Aydelott of General Electric Company, gave their impressions of what they had seen of electric traction during recent visits in Europe. Technically, all the installations are successful.

At the same meeting, two new types of electric locomotives for the Pennsylvania—one designed by General Electric and one by Westinghouse—were described. One employs a new type series a.c. commutator-type motor and the other uses sealed-type mercury-arc rectifiers and d.c. diesel locomotive motors. Both operate from an 11,000-volt, 25-cycle, a.c. overhead contact system.

Discussion of the locomotives was controversial, with representatives of each manufacturer producing data to show why his locomotive was better than the other. This had more of the flavor of salesmanship than of engineering, since railroad representatives pointed out that the locomotives were so different that they were scarcely comparable.

Concerning electrification in the United States Mr. Aydelott called attention to the fact that 70 per cent of the two million horsepower of electric locomotives in service operate under an 11,000-volt, 25-cycle, single phase trolley wire. While new systems look attractive, he said, there is little advantage between different systems in service and, at best, little to be gained by adopting a new one now, when much greater reductions in cost could be realized by standardization.

Mr. Aydelott does not see much immediate prospect for new electrification — but conditions may change. When this occurs, he said, the industry should realize the advantages of repetitive manufacture, and all should agree to use the same system. Much significance attaches to his remarks because he represents the company which, for many years, has been the proponent of a direct current distribution system for electric traction.

The "Battle of the Systems" which raged in the early days of electrification undoubtedly retarded its adoption. Since the manufacturers could not get together on this subject, it left doubt in the minds of possible railroad users, and they, in substance, said, "If you can't make up your minds, we'll use steam."

The inference could be drawn that the industry might take a leaf out of the diesel locomotive book, and use that example to keep manufacturing costs of electric locomotives down. That, of course, would require much greater volume of production than is now possible.

There are engineers who believe, however, that shrinking oil reserves with attendant increase in the price of oil as compared with the price of electrical energy will, in the not too distant future, cause railroads again to seek the advantages offered by electrification. Perhaps by that time they can be ready with rolling stock which will permit of standardization comparable to that of the diesel. Agreement on a type of power supply is apparently established. It is an important first step.

Modern heavy-duty track construction has imposed new requirements for the maintenance-of-way man to meet.

The Maintenance-of-Way Man—

His Role in Railroading Today

An analysis of the functions and importance, in these changing times, of the men who supervise the activities of the maintenance-of-way departments

By

MAX K. RUPPERT

First Vice-President
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Chicago

Mine has been the unusual privilege of meeting and knowing maintenance-of-way men on railroads throughout the United States, Canada, Mexico, and Alaska. In more than 25 years of meeting and working with M.-of-W. men from section men up, including chief engineers, I have come to know and to appreciate the qualities of those who devote their lives to the maintenance phase of railroading. I shall attempt to put into words, in a limited manner, my impressions of the values which I feel management should never cease to appreciate about the qualities of the men who maintain the railroad fixed plant and without whom no promise of operation could be successfully sustained.

From the beginning of recorded remarks on the development of railroads in North America, the accounts are replete with achievements of those who conquered nature's barriers and who, over the years, continue to preserve their contribution to improved operating conditions despite the problems created by floods, blizzards, hurricanes, and storms, which must be faced and conquered through straight thinking, coupled with daring, ingenuity and resourcefulness.

Then, too, the M.-of-W. man is faced with the problem of meeting and adjusting instantly to a changed tempo which frequently is brought on by a disturbance in the current of revenues. He may, and frequently does, find himself operating at the full-speed-ahead status, when, suddenly, the red board flashes up, bringing him to a complete stop. It requires men of character and a capacity for leadership to cope with such changes without losing stride.

I appreciate, of course, that other departments of railroading are also affected by these changes but I submit that the M.-of-W. men are the first to feel the complete

This article is based on an address at a meeting of the Pacific Railway Club at San Francisco, Cal., on January 17.

Management must depend on maintenance men to attain and preserve an adequate track structure despite the higher hourly wage rates that prevail today.

shock and also are required to evolve the most drastic changes in their operations. There is this to be said: Regardless of the causes for curtailment of force and work the M.-of-W. man has just as much responsibility to the management for maintaining a safe structure for the few trains that might operate as he has for the maintenance of the property when operations are at full throttle. Times innumerable all of us have seen this condition exist and have seen the M.-of-W. part of the problem solved through the qualities I have stressed.

The maintenance men of 1925, in general, were handling rails averaging 33 ft. in length and, with few exceptions, weighing not over 110 lb. per yard. Numerous railroads were using rails ranging from 90 lb. per yard to 100 lb. Roadbed and structures were maintained for the security of passenger trains moving not to exceed time card schedules of 60 m.p.h. Freight-train speeds were correspondingly lower, and the average length of the freight trains of the 1925 era was approximately 90 cars.

The maintenance man of 1952 finds that he is geared to the need of handling rails averaging 39 ft. in length and weighing from 115 lb. per yard to more than 133 lb. per yard. His planning in this field must also contemplate the use of even longer lengths of rails. Through welding, 78-ft. lengths of rail are not uncommon, and frequently stretches of continuous welded rails are being laid. The alterations in practices and equipment to handle the changes in just this one sphere have required the application of a high degree of ingenuity and resourcefulness.

Evolution in Rail-Laying Practices

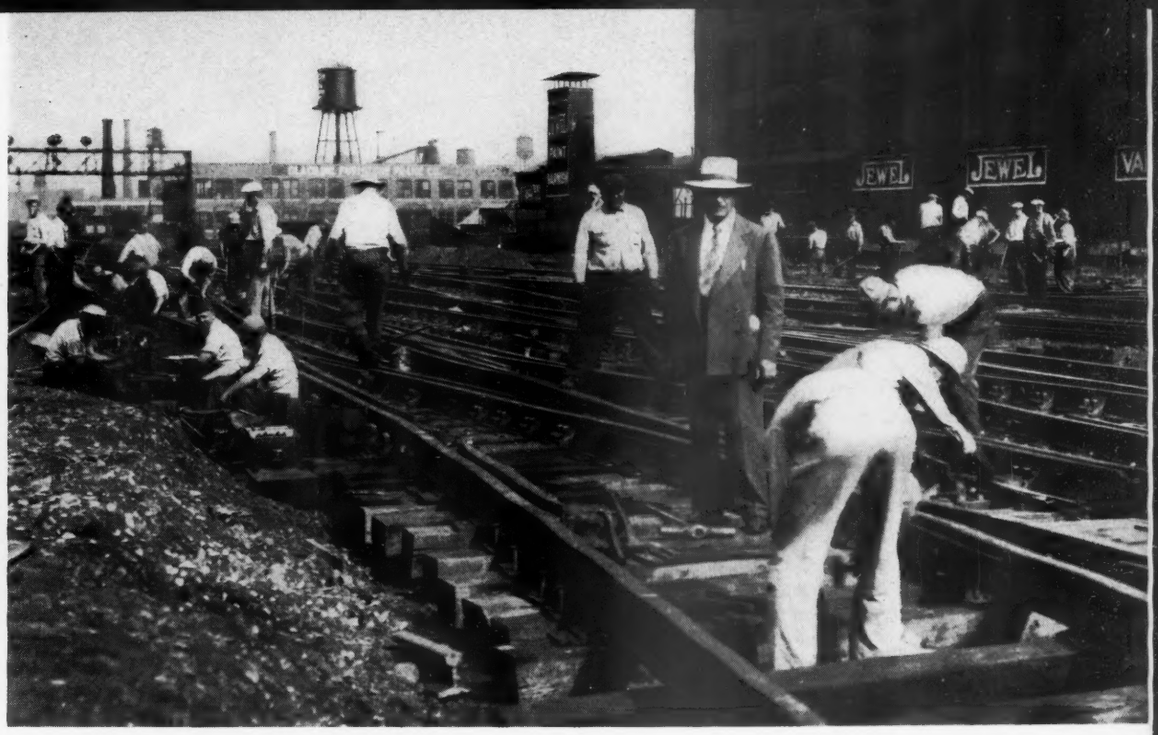
In 1925, with few exceptions, rail laying was done by hand labor. There were a few power and hand-operated rail layers in use but, in general, rails were tonged into place. Rail laying today is a completely mechanized procedure. Moreover, it is an operation that must be reviewed with the operating department to the end that there will be a minimum of interference with the flow of traffic. In the old days, this matter was largely handled between the roadmaster or supervisor and his local dispatcher, because rail-laying then did not necessarily imply "use of the railroad" for a given period, but on the other hand was mostly a case of "breaking track" and "cutting it back into service" when traffic required. However, with today's highly organized gangs and equipment, "killing the track" is frequently a "must" and, therefore, requires a much more careful integration of all factors related to the operation.

Today's rail-laying gang represents a fortune, comparatively, in the investment required in men, materials, and machinery, and in consequence requires proportionate administrative qualities in the "top side" M.-of-W. men upon whose shoulders rests the sole responsibility for insuring the return upon that investment. This is only *one* of the phases I wish to touch upon in the development of my theme but those railroad men who are "sweating out" the transition know of the million and one facets connected with details of the job.

Responsibility for Mechanization

Through the 25-year cycle with which we are concerned, M.-of-W. men have had to provide their contribution to the whole of the railroad picture against a rising tide that at times has seemed impossible to withstand. I refer to the changing hourly wage and work-day conditions. I believe that every practicing M.-of-W. man will, in the main, agree that we have never found a substitute for hand labor well schooled and trained in good M.-of-W. practices. However, the pressure of economics has made it necessary to develop mechanical substitutes. The maintenance man of today bears the responsibility for seeking out better and greater ranges of labor-saving equipment. It is no light burden. An improper recommendation in this field can cost untold sums. Those in authority are alert to the fact that their recommendations must contemplate today's problems as well as conditions to be met in future years. Management cannot afford capital expenditures to acquire equipment that meets only one set of conditions or solves only an immediate problem.

In 1925, the prevailing labor rate for section or extra gang men was 33¾ cents per hour. The work week was generally 48 hours. Today, the hourly labor rate is about $1.40 per hour and the work week is 40 hours. At the same time the need for an adequate track structure is greater than ever before. How to secure and preserve



The modern maintenance man must have "far greater ability than was required 25 years ago."

this structure under today's labor conditions is a challenge which management probably looks to its M.-of-W. men to meet. The situation is likely to become worse before it becomes better. It is little wonder, therefore, that the M.-of-W. man of today—from the bottom to the top—is a very real factor in meeting management's responsibility to provide better service despite less net return and still preserve the railroads as one of the prime institutions still doing business under our concept of the free enterprise system.

More Planning Skill Required

Today's M.-of-W. man must plan his work programs with skill never before expected. He must submit budgets which contain the realities that will invite the respect and approval of those vested with the responsibility of determining whether or not the estimated revenues will provide the funds to carry out such budgets. The maintenance man must submit work programs that contain the long-range view. Certain temporary expedients will, of necessity, be considered, but, in the main, programs must be based on the fundamental principle of the greatest return possible to the owners from the funds invested.

To carry out their programs M.-of-W. men must assemble men and equipment whose availability and consistency of performance can be depended upon. To insure this, those responsible must know the scope of the performance of the equipment they recommend, and they must be certain of their ability to integrate trained men into the ranks of those who must daily make the performance promise come true. This is no small responsibility and necessitates a far greater ability than was required 25 years ago.

The mechanization which has transpired in the M.-of-W. field in a quarter of a century is almost unbelievable. There are times when those who have moved into positions in management, and must assume the responsibility of approving maintenance budgets, have not had an opportunity to keep themselves fully informed on some of these developments. It is here, then, that the M.-of-W. man assumes a burden of responsibility that *must* be met completely. For upon his judgment frequently depends the approval of expenditures running into hundreds of thousands of dollars. His superiors in management must have the confidence borne of experience with the individual's previous decisions to know that he is right and that his recommended investments will pay off.

Inventories of "stand-by" materials should be predicated on the needs of the properties rather than on a comparison of their dollar value with that of some previous date.

Much of my source material for this article was acquired from a property on which conditions are generally comparable to those prevailing on progressive railroads throughout the country. To illustrate why I feel today's M.-of-W. man deserves a bow, let me present just a few simple facts. In 1925, the property to which I refer operated 13,586 miles of track. For track-main-

tenance purposes it was then divided into 1,100 sections. These sections employed 6,600 men—an average of six men per section. In 1951, this property had 12,258 miles of track, divided into 758 sections on which there were 3,032 men employed—an average of slightly under four men per section. In 1925, this property, during the working season, employed extra-gang labor to the extent of 4,000 men. In 1951, it used less than 2,400 extra-gang laborers.

The traffic volume carried by this railroad was slightly over 47¾ billion gross ton-miles in 1925. This performance was surpassed in 1950 by more than 6 billion gross ton-miles. The greater tonnage of 1950 was handled by locomotives with heavier axle loadings and in longer trains made up of greater capacity cars, moving at considerably higher speeds than in the 1925 era. To compensate for these changes rails and accessories have increased in weight and their physical makeup has been improved through scientific progress.

These improvements nevertheless are not a "cure-all." There exist certain basic elements for maintenance of good track which cannot be eliminated by improvements to the track structure. Upon the shoulders of today's M.-of-W. man, therefore, rests the very real responsibility of serving his management properly and doing it with fewer men than heretofore. This work he must do with equipment designed to produce the same or higher quality work that was formerly performed largely by hand. This responsibility invokes the need to know the types of equipment to be used as well as the ability to select personnel capable of accepting and utilizing instruction in the use and care of the equipment.

Must Look to the Future

As I have emphasized, the M.-of-W. man must consider his responsibility not alone in the light of today's needs, but with a view to the future. Maintenance work performed today may very well be called upon to stand the test of time, not only with respect to the quality of the work, but also as to the quality of the individual's responsibility for the actual performance of the work. Certain types of equipment will satisfy the needs on one portion of a property, but will not, by reason of some localized condition, perform the same service from the standpoint of endurance on another portion of the property. To avoid mistakes in selection of equipment and to insure having balance in the units utilized and distributed over a railroad system, there must be close coordination of thinking from top to bottom.

The achievement of such integrated thinking requires constant vigilance and a dedication to a sense of duty on the part of every individual affiliated with the maintenance-of-way organization of a railroad. Too much emphasis cannot be placed upon the necessity of selecting men who have higher qualifications than were required for performance of the same type of work a quarter century ago. The latter requirement, it seems to me, is a positive "must" if the current maintenance needs are to be met and completed in fewer hours with less manpower.

Today's maintenance-of-way department heads have a factor to contend with that was undreamed of in the 1920 decade. I touch upon it here only because it seems to me to be another of those conditions which may become worse before it becomes better. In 1925, we were dealing with monetary values that fortunately were not disturbed by the upheaval in world affairs resulting from World War I. This meant that the man in charge, and responsible to his management for operating within budgetary limits, could make comparisons which, when analyzed, were reconcilable with activities and conditions preceding his administration. It is not an uncommon experience today for some of us temporarily to lose sight of this fact. It affects the administration of M.-of-W. work in ways too numerous to permit all of them to be mentioned.

Consideration of only one of these facets will be sufficient to illuminate the change and its effect upon those who in maintenance-of-way so frequently have to defend or establish the correctness of their judgment. The question of inventories is one which management must unceasingly keep before those who are responsible for seeking expenditures from the earnings of any given property. In large-scale activities, it is very easy indeed to fall into bad habits in the matter of material accumulation unless vigilance is practiced constantly. No one can find fault with a policy of exercising careful control over inventories. However, the M.-of-W. department is confronted with the fact that its primary duty is to be prepared under all conditions and circumstances to provide a foundation and a structure upon which management can rely for the movement of trains. This duty invokes the responsibility of determining how much standby material is required to implement it.

There must be certain materials for M.-of-W. use, available on any railroad property at all times, in order that repairs and replacements can be effected within a reasonable time whenever the structure is impaired from whatever cause. Such materials, in my opinion, should be considered as "units" which are basic and essential to meet the needs for complete operation. If this were a universal understanding, the question of the correctness of M.-of-W. inventories would be simple to answer. It would eliminate the mistake which has resulted many times when curtailments become mandatory—of depleting the agreed upon "units" of stand-by materials because the dollars involved were greater than at some preceding date. It is discouraging to the M.-of-W. man to be told that his inventory is out of line when he knows that the statement is predicated upon a comparison of dollars invested, rather than whether the inventory reflects the true necessities.

Still Romance in Railroading

In years gone by, many men, particularly those in the engineering profession, became railroaders because of the romantic allure and challenge connected with the conquering of physical barriers, as well as that of an activity that was expanding the business horizons of this country. There remain today just as much romance and challenge in the business of railroading as existed in the beginning. Granted, the pioneering has been done. We are now in the phase of preserving the principal contributor to the greatness of the United States—the railroads.

I firmly believe that our population contains men who view any challenge to their ingenuity and resourcefulness with as much eagerness as was possessed by those who first dreamed of spanning the nation with huge integrated railway systems. The keystone to enduring volume for a transport agency is to provide a service that is secure, safe and comfortable. The one ware for sale by the railroads is leadership in land-borne transport. To make certain of the security of this leadership railroad managements must depend upon the men who devote their energy and thinking to the creation of a better and more dependable structure. Theirs is the task of holding the gains to date and, with management's understanding and assistance, meeting fully their responsibility of developing M.-of-W. men to follow in their wake.

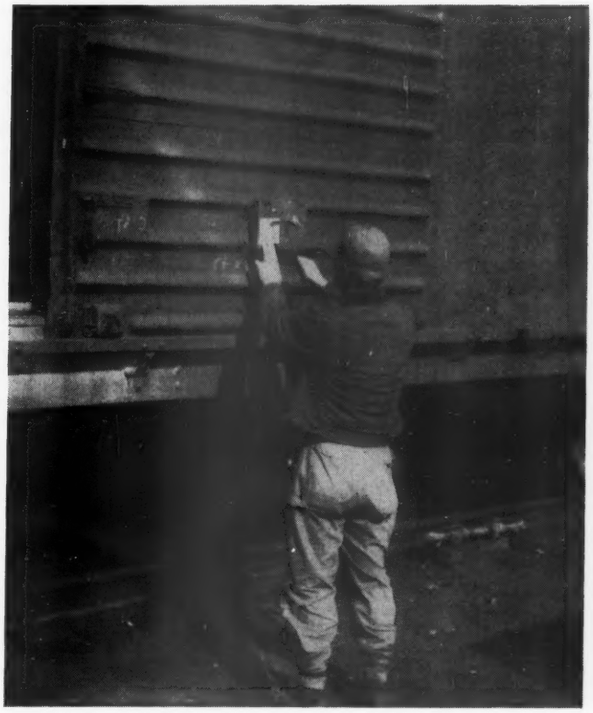
Rearrangement of the spotting diagrams at freighthouses sometimes can promote better observance of car service rules and save yard forces much extra switching.

How to Secure Best Observance of Car Service Rules

Adhering to these rules will secure maximum economy in car handling and insure best distribution of available car supply

By E. W. COUGHLIN
Manager, Railroad Relations
Car Service Division
Association of American Railroads

Any railroad man who has anything to do with placing empty cars for shippers' loading, or is in any way concerned with disposing of surplus empty cars, needs: (1) full understanding of the provisions of Car Service Rules 1 to 3 (freight) of the Car Service Division, Association of American Railroads (A.A.R. Circular T-210); and (2) at least a general knowledge of the geographical location of the various railroads.* Coupled with these must be information as to the destination and routing of intended shipments, and knowledge of the cars, by



Car Service Rules will be better conformed to if car inspection forces are fully informed as to destinations of loads and specific needs of shippers.

*A general knowledge of the geographical location of the principal car owning railroads may be obtained from the "Car Selection Chart" contained in the Code of Car Service Rules and in the Railway Equipment Register.

WAYS AND MEANS TO GREATER CAR EFFICIENCY

This is the first of a series of articles on basic principles and preferred practices in freight car distribution and handling, prepared by E. W. Coughlin, manager of the Railroad Relations Section of the Car Service Division of the Association of American Railroads. The author's qualifications in this field are well known to most readers of Railway Age. All statements and opinions are here presented as his own, and not as spokesman for any organization. The subject, always important, is particularly timely under present conditions of critical car supply, when it is essential that every carrier and shipper employee having to do with car movement shall be fully informed as to the car service rules and practices which contribute to reducing car shortages and improving efficiency. The next article is scheduled to appear in a March isue.

ownerships, of various types and physical fitness, reasonably available to supply for any loading. But only through obtaining, locally, proper detailed car orders from shippers, and securing from railroad sources adequate records of empty cars available to apply on them, may a knowledge of the rules be translated by rail employees into the best possible utilization of the available cars.

Loading "Foreign" Cars

In railroad vernacular, a "Rule 2 car" is a car owned by a direct connection of the line in possession of the car; a "Rule 3 car" is a car owned by a line not a direct connection of the line in possession of the car. Rules 2 and 3 indicate the options a road has for loading foreign cars. If loaded otherwise, they are, of course, in violation of the rules. A so-called "Junction Rule 2 car" is a car owned by a direct connection of the holding road within switching limits of the station or terminal where the car is located. If a car is loaded in that terminal other than to or via the owner's rails, that loading is both a violation of Rule 2 generally and of the particularly important portion of this rule which applies to cars located at a junction with the home road. A "home," "system" or "Rule 1 car" is a car on the road to which it belongs, or owned by the road under discussion; a "foreign car" is a car on a road to which it does not belong, or owned by other than the road under discussion. For loadings beyond the rails of the loading line or for long distance hauls on such line, particular effort should be made to select foreign cars which through such loading will be advanced toward owners' rails.

As a case in point, suppose a box car is to be loaded on the Chicago, Rock Island & Pacific at Topeka, Kan., to Harrisburg, Pa. The Rock Island has reasonably available two physically fit box cars, one of Rock Island and one of Reading ownership. If the Rock Island car were used for the loading it would be, when unloaded at Harrisburg, 751 mi. from the nearest Rock Island point, Chicago. The Reading car is, at Topeka, 1,338 mi. from the nearest Reading point. Thus the use of the Rock Island car instead of the Reading would result, after the unloading of the car at Harrisburg, in the two cars being on hand empty a total of 2,089 mi. from owners' rails.

Unless someone later does a better job of loading under Car Service Rules on one or both of these cars, an empty haul of 2,089 mi. has been built up to get them to owners' rails. In other words, the two cars will have been placed, by the loading accorded, an aggregate of 751 mi. farther from owners' rails than they were at Topeka, and 2,089 mi. farther from owners' rails than had the Reading been used in place of the Rock Island for loading at Topeka. By using the Reading car for the loading from Topeka to Harrisburg it would be relocated to a junction point with the owner while the Rock Island car would, of course, be retained on owner's rails.

Cars Supplied to Industries

A prime requisite toward the best practicable car service rule observance in loadings by industries, whether on private sidings or on team tracks, is advance knowledge—by those railroad employees whose duty it is to supply empty cars—of the destination and routing of intended shipments, commodity to be shipped, size and type car required, and the "spot" at the loading dock at which the car will be loaded. Given this information, all that remains to be done is: (1) to select from the available empties of the needed size, type and physical fitness, those ownerships which, when loaded, will result in the best possible performance under car service rules; and (2) to switch them into the desired loading spots.

All this presupposes the shipper's placing, as much in advance as possible, definite car orders giving the needed information. Without such advance and detailed car orders no proper selection from among available cars is practicable. It may fairly be said that no one other cause has been so provocative of car service rule violation—with attendant excess empty mileage and loss of car days—as loose handling of shippers' car orders and placing of cars on such orders.

That a railroad may require shippers to place written advance orders for cars is well established in various decisions of the Interstate Commerce Commission. In 56 I.C.C. 449, for example, the following appears:

"The carrier is entitled to reasonable advance notice in writing of a demand for a car, and it is reasonable that the carriers should know the kind of service that will be required."

While this is not specific as to necessity for shipper specifying routing and destination in car orders, it is believed this is fully understood to be a reasonable requirement as to the "kind of service that will be required" and one which shippers will not question.

Advance Car Orders

It may be argued that in times of light traffic and easy car supply there is little need for advance car orders; that the problem then is where to store surplus cars, and they had just as well be kept available for use on shippers' sidings as elsewhere. This argument is sound so far as the purely local switching expense is concerned. It ignores, however, the fact that at just such times of lowered revenue it is doubly important to keep empty car haul at the lowest possible figure; that the best way yet devised to this end is a strict compliance with car service rules; and that only through advance knowledge of the routing and destination of prospective shipments may a railroad switch out and supply, from the available cars, the most suitable ownerships. Obviously it is uneconomical to allow the building up of several thousand or even several hundred empty car-miles in order to save an extra switch move at the loading point.

In any period of high traffic levels and heavy car demand the practice of maintaining a "bank" of empty cars at industries for prospective loading, over and above

"In any period of high traffic levels and heavy car demand over and above the cars actually ordered and needed currently, cannot but result in a serious loss of car days."

the cars actually ordered and needed currently, cannot but result in serious loss of car days. Also, through heavy misuse of cars under car service rules, in most instances where "banks" rather than selective switching in of proper ownerships are relied upon, originating territories and railroads are deprived of their proper share of the cars built to serve their needs.

In some few instances it will be found shippers may not be able to place detailed advance car orders showing destination and routing of the intended loadings. In most such instances, as many shippers will admit, a survey of billing for a representative post period will indicate a well defined trend of movements, by direction or general destination territory. This information will permit selection of cars of certain ownerships, for placement to the industry, which will insure the best practicable degree of observance of car service rules. In these cases, also, the shipper, once he is actively interested, can do much toward proper car loading by matching, as nearly as possible, the empty car and the shipment's destination.

To Handle Shipper Car Orders

The following is recommended as the method of handling car orders best calculated to obtain maximum results in proper loading of cars in accord with car service rules and at a minimum of expense:

1. Placement by the shipper, with the car order clerk of the railroad serving his industry, of detailed car orders as far in advance of loading date as practicable, giving type and size of car required, date desired, "spot" at which to be loaded, destination, routing and commodity.

2. Prompt transmission of these detailed orders by the car order clerk to the proper yard, in order that equipment most suitable for use in accord with car service rules may be selected and applied. The original car order as placed by the shipper, or a carbon copy, may be used as the car order to the yard, and after the yard office has selected from the available empties those cars to be switched to the shipper, and listed them on the form, it may well serve as an order to the switch engine foreman. After the foreman has completed the spotting, and entered the spotting time on the form, it should be returned to the car order desk as the completed record. (Shippers' car orders generally are phoned in to the car order desk, and it should be easy for this desk to make any necessary carbons at first writing.)

3. Close working arrangements between the yard and the car order clerk, particularly in the case of cars to be loaded in switch service for connections' road haul, so that if proper ownership cars are not available on the loading line orders may be placed promptly with the road-haul line. (Responsibility as to car supply for switch loadings is set forth in A.A.R. Circular T-71, page 403.)

4. Where car orders are placed by switch-haul line with road-haul carrier, the latter should do the switching necessary to select most proper available ownerships and deliver them promptly on orders, together with billing or carding indicating, unmistakably, loading for which intended.

In connection with this last point, a triplicate form in use in the St. Louis terminals has simplified and standardized to a marked degree the handling of cars furnished connecting lines on orders. The original of this triplicate form, on white paper, is used as a waybill for the empty movement; the duplicate, on yellow paper, is furnishing line's office record of billing, and triplicate on card stock is card for application to car. The three forms are filled out by car order clerk with data as to order number, type of car, railroad to which to be delivered, lading, shipper, date desired, etc., and passed to the yardmaster's office where a car conforming to the physical requirements and most suitable as to car service rule observance is selected. Then the car number and initial are entered, the card portion of the form applied to the car, the bill portion is placed in bill box after necessary switch list or switching instructions have been arranged, and the record portion returned to the car order clerk with notation as to date the order was filled.

Where cars of a particular grade of commodity classification are required, such as "flour box," "grain box," etc., and where a limited supply of these cars is not on hand, it often will be necessary for the serving yard to pass car orders on to car inspectors so that they may

Shippers' placing of detailed car orders can result in good observance of car service rules, which in the long run means economy for shippers and carriers.

RAILROADS CLASSIFIED ACCORDING TO HOME DISTRICTS AS SHOWN ON MAP

Railroad	District No.	Railroad	District No.
G. & F.	17, 18	L. & N. E.	13
G. M. & O.	8, 10, 11, 15, 18	L. S. & I.	6③
G. N.	1, 5, 6, 20	L. V.	13
G. T. W.	12	M. A.	8, 9, 10
I. C.	6, 8, 10, 11, 15, 18	M. E. C.	14
I. G. N.	9	M. C.	8, 11, 12, 13, 16, 21
I. T.	8, 11	MILW.	1, 5, 6, 8, 11
K. C. S.	7, 8, 9, 10	M. & S. L.	5③, 6, 11
K. O. & G.	9	M.St.P.&S.S.M.	5, 6, 11, 20
L. & A.	9, 10	M. K. T.	7, 8, 9
L. & H. R.	13	M. P.	7, 8, 9, 10
L. I.	13	M. S. C.	18⑤
L. & N.	8, 10, 11, 15, 18	N. & C.	15, 18
		N. H.	14

A portion of the Car Selection Chart.

make a selection of physically fit cars from the available empties. In such cases about the only means of securing ownerships proper for use under car service rules lies in one of the following:

1. To educate car inspectors as to car service rules so that they may pick from the available physically fit cars those ownerships which may best be utilized under these rules; or,

2. To list for the car inspectors ownerships which will be most acceptable.

Substantially the same comments apply to the loadings of cars at stations and transfers as to the car supply for industries. Much of the improvement possible in the proper use of both foreign and system equipment at freighthouses and transfers depends upon a proper coordination of the efforts of yard and house or transfer forces.

At the larger station and transfer operations a permanent "spot" system, under which specified "spots" or loading locations on certain tracks are used daily for loadings to the same destinations, is almost a necessity. Station employees are trained to load freight for certain destinations into cars at designated spots, and it is not practicable to switch the loading to accord with the various ownerships of cars placed at a "spot" on any given day.

In these instances the serving yard should have a "spot" list or diagram showing routing and destination of the cars to be loaded at the various locations, and should be responsible for selecting, from the empties available for freighthouse use, the ownerships to be drilled in to the various spots in order to produce the best car service rule performance in outbound loadings.

At one large eastern transfer intensive study by a car service division representative, working with local railroad forces, resulted in a complete rearrangement of the "spotting diagram" and loading arrangements. This enabled the railroad to handle the business with less switching, both at origin and at yards intermediate to the destination, and with a considerable improvement in car service rule observance.

At smaller freighthouses the permanent "spot" system may be undesirable or unnecessary, and it can result in excessive violation of car service rules. As an example, at a small transfer operation near Pittsburgh, a permanent "spot" system was in effect. The inbound cars, after unloading, were utilized for outbound loading, with no switching during the day. This system allowed no flexibility in the proper utilization of the available cars. As a result, foreign-owned cars were misused about 57 per cent of the time. The transportation officer of the railroad abolished the permanent spot system. A later check showed that all foreign cars loaded were applied correctly under service rules. This one change resulted in a saving of approximately $900 per year in empty mileage costs to the carrier involved.

Getting cars back to the home road is one objective of the car service rules. Among other things this practice gives the best assurance that cars will be properly maintained.

Most of the larger freighthouses have a considerable amount of loading destined to connecting lines. Some of these destinations are at the junction with the delivering road, while others are several hundred miles beyond the junction point. It is much more objectionable for the loading road to use a system car for the distant off-line point than to the freighthouse at the junction point, providing proper foreign car is available for the far distant point. Obviously, in the case of the system car loaded to the junction point, either the car can be reloaded or turned back to the owner empty, with little or no mileage or expense, while the beyond-junction car is more likely either to build up wasteful empty mileage in its return to the owner or to promote further violation of car service rules, which again creates excess empty mileage.

Complete Study Necessary

A complete study of all pertinent factors, both at the originating and destination end, is often necessary to a determination of which are the proper cars to use for any regular flow of traffic. As an example, an eastern railroad was doing an excellent job, at its far eastern freighthouses and transfers, in selecting, switching in and loading western ownership box cars to one of its Chicago freighthouses. Certainly this would seem to be ideal car utilization, for in most cases these cars could be delivered readily to the owners when empty. But a survey at the Chicago freighthouse sharply reversed this happy picture.

The freighthouse in question is in a most congested and inaccessible spot in downtown Chicago. Practically all of its loadings were to the East, and it was necessary to load outbound the same cars which came in from the East under load. The western cars, therefore, which had been so well applied on loadings to this house by eastern originating points, were being reloaded back to the East, many to the same freighthouses and transfers which had loaded them originally to Chicago. Actually, the result of the initial excellent selection under car service rules in the East was to put western owned box cars in shuttle service between the East and Chicago. Since the eastern road in question, in common with most eastern roads, must constantly move western-owned box cars westward off its line empty to compensate for a preponderant eastward loaded box movement, the operation described resulted in retaining on the rails of the eastern carrier more western box cars than were wanted or needed.

As a result of the study, in the East every effort was made to load to Chicago box cars owned by the eastern road, and to send the western cars home empty to their owners. There was no material saving in empty haul, but the change did allow the eastern road to reduce the number of western owned box cars on line, with a consequent reduction in car hire expense and a better relocation of cars to owners' rails.

This, of course, is one of the exceptions which proves the rule, and confirms the need for individual study of traffic movements. In ninety-nine cases out of a hundred, however, the loading of proper foreign ownerships in accordance with car service rules to a far distant on-line freighthouse will produce savings in empty haulage which will much more than offset the effort and expense involved in selecting and switching in the proper cars at the originating freighthouse.

Car Selection Charts

In the proper selection of empty cars for loading, in accordance with car service rules, the A.A.R. Car Service Division's "Chart Showing Home Districts for all Principal Car Owners—Principles to Govern Car Selection" (see Fig. 3), more commonly known as the Car Selection Chart, can be extremely helpful. (The predecessor of this chart helped reduce one shipper's car service rule violations from 70 per cent to practically nothing.)

The map carried on this chart divides the United States and Canada into over 20 sections. In each such section are shown the initials of the principal car-owning railroads operating therein. Thus, for example, the territory comprising Arizona and New Mexico, section No. 4 on the chart, shows the Atchison, Topeka & Santa Fe; Colorado & Southern; Chicago, Rock Island & Pacific; San Diego & Arizona Eastern; Southern Pacific; and Southern Pacific of Mexico.

Anyone having to do with car distribution—whether he be a local freight conductor, shipping platform fore-

man or other railroad or industrial employee—who has a string of empty cars from which to select one for loading to a point in Arizona can, after he looks at the map and the initials of the cars available, determine whether or not he has available a car owned by any of the mentioned railroads. If not, he may still do a good job of advancing cars *toward* owner's rails by scanning the list of railroads serving the next adjacent territorial groups, and selecting for the loading to Arizona cars owned by railroads which operate in these adjacent districts.

Conversely, the principal railroads are classified near the bottom of this chart according to the districts in which each operates. If, for example, a shipper or a railroad employee has on hand a car owned by the Clinchfield and desires to know to what general territory it may properly be loaded, it is only necessary to refer to the C.C.&O. listing at the bottom of the chart to determine that it would be preferable to send this car to districts 15, 16 and 17, which include Kentucky, Tennessee, Virginia, West Virginia, Maryland, North Carolina and South Carolina.

It is not claimed that the national Car Selection Chart is in all cases a precise guide to exact utilization of cars in accordance with the detailed provisions of car service rules. As an example and as noted above, the chart would suggest use of a C.C.&O. car to a group of states including Maryland and Virginia. As a matter of fact, the Clinchfield does not get into Maryland and touches only the extreme western part of Virginia. If, therefore, a C.C.&O. car were located at any point in eastern Virginia, such as Richmond, Norfolk or Petersburg, it would not be advanced toward owner's rails by loading to a point in Maryland. If, however, the car were located at a considerable distance from home territory, for example in districts west of the Mississippi or in New England, loading to the block of states in districts 15, 16 or 17 would materially advance it toward owner's rails.

The only exact car selection chart which could be prepared would be an individual issue for almost each loading station or in fact for each railroad at each loading station. The national chart is obviously a compromise between simple and readily understandable national charting and listing which will bring about a reasonably high degree of relocation of cars toward owners' rails, and the vast amount of work which would be necessary to set up individual selection charts for almost every station on each railroad.

Special Car Orders

Under Per Diem Rule 19, the Car Service Division of the A.A.R. is clothed with authority to suspend or permit departures from Car Service Rules 1 to 6, inclusive; to exempt, when necessary, cars of any type from the provisions of these rules and provide other regulations under which such cars shall be handled; to transfer cars from one railroad or territory to another when necessary to meet traffic conditions, with due regard to car ownership and requirements.

Over the years Car Service Division policy has been to avoid to the fullest possible extent the issuance of orders which involve departures from the code of car service rules, or of formal orders for the transfer of cars from one railroad to territory of another. Notable exceptions have been the often recurring need for special orders to relocate box cars to the western "granger" roads shortly in advance of the wheat harvest; the orders providing for special handling of automobile device cars; and the long standing order requiring empty return to owners' rails of Chesapeake & Ohio, Louisville & Nashville, Norfolk & Western and Virginian coal cars, known as Car Service Division Coal Car Order C-411. Originally issued in September 1924 and cancelled and reinstated several times since that date, this latter order was reissued in October 1938 and maintained ever since.

This latter order comes under fire periodically from other roads which would like similar directions for empty return of their own coal cars in times of heavy demand, or which wish to use these ownerships for loading, which it is usually claimed will take the cars to or toward owner's rails.

The facts are that these four roads are predominantly coal originating roads; that a large proportion of their coal loadings move beyond their rails; and that by reason of geographical location and traffic movements they receive extremely few foreign coal cars empty, or loaded for release on their rails, which could, under car service rules, be pressed into loading on their lines.

In postwar years there has been a need to give similar treatment to certain additional ownership coal cars, such as an order (1) to roads lying roughly in the territory between the Pennsylvania-Ohio line in the East and the Kansas-Colorado line in the West to exempt from local use and send home empty hoppers and coal type gondolas owned by the Southern Illinois coal producing roads—Chicago, Burlington & Quincy, Chicago & Eastern Illinois, Illinois Central and Missouri Pacific; and (2) to Eastern Allegheny and Canadian roads to handle similarly Baltimore & Ohio hoppers.

Orders restricting car utilization, providing for relocation between railroads or territories, or modifying in any way the usual provisions of car service rules as to options for use or movement, are issued by the Car Service Division only as a last resort, for the benefit of the industry as a whole, and should have the active support and full compliance of all roads.

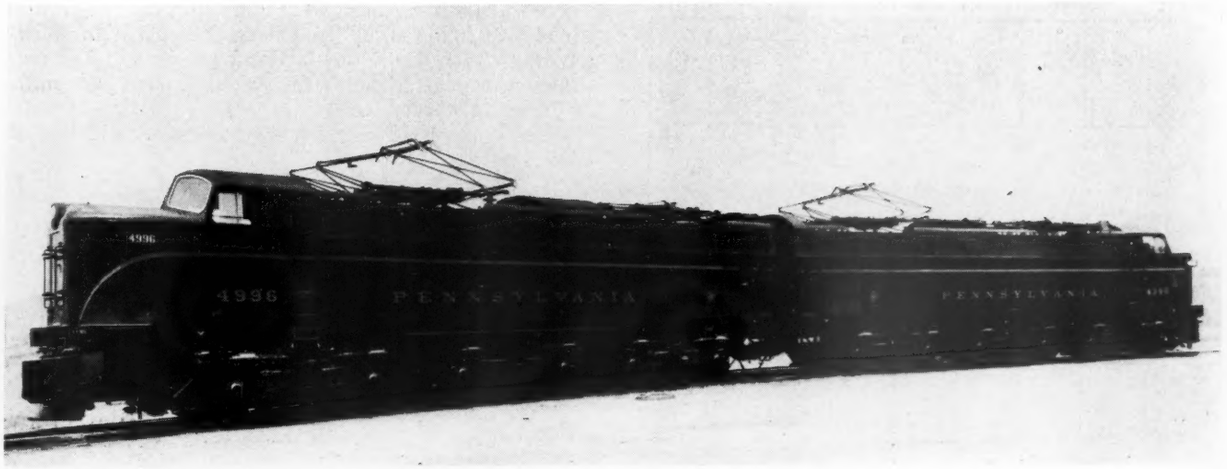


Fig. 1—Type 2(B-B-B), 6,000-hp., 11,000-volt, 25-cycle, Ignitron locomotive.

The Pennsylvania Receives Two Ignitron Rectifier Locomotives

Westinghouse-built, they take 11,000-volt a.c. power from trolley and employ direct-current diesel traction motors

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Westinghouse Electric Corporation
East Pittsburgh, Pa.

Recent developments of the Ignitron rectifier in the industrial and power fields have revived interest in using it for railway work. Extensive tests in the laboratory and on an experimental railway car have demonstrated that a locomotive using Ignitron rectifiers offers promise in combining the best features of the a.c. and d.c. electrification systems. Two 6,000-hp. Ignitron rectifier electric freight locomotives recently placed in service by the Pennsylvania offer a fulfillment of this promise and mark a significant innovation in the development of railroad motive power.

Ignitron Rectifier

In these locomotives, the Ignitron rectifier and its associated apparatus convert energy received from an 11,000-volt, 25-cycle alternating-current trolley wire to direct-current for the operation of conventional d.c. traction motors.

The rectifier is a mercury-arc device which employs an ignitor to initiate the arc at each positive half cycle, and to permit the arc to extinguish at each negative half cycle.

This is the first publication of a report by the Land Transportation Committee of the American Institute of Electrical Engineers covering an innovation in electric motive power.

It has long been recognized that the low-voltage, direct-current, series-wound motor is well suited for traction purposes. As compared to an a.c. traction motor it has the advantages of relative simplicity in construction and of ability to develop higher starting torques without exceeding limitations of commutation or heating. On the other hand, the single-phase a.c. system, as adopted by the Pennsylvania, results in economies in transmission and distribution systems, both in first and operating costs.

For a long time, the mercury-arc rectifier for converting alternating current into direct current has offered an opportunity to combine the advantages of the two systems. As early as 1914, a mobile rectifier was applied to a 25-cycle, 11,000-volt multiple-unit car operating on the New Haven. It was removed from service after 22,000 miles of operation because the rectifiers of that day had not been developed to the point where they were practical for such an application. They were of the multi-anode, pumped type, and with the seals then available difficulty was experienced in maintaining the vacuum. There were

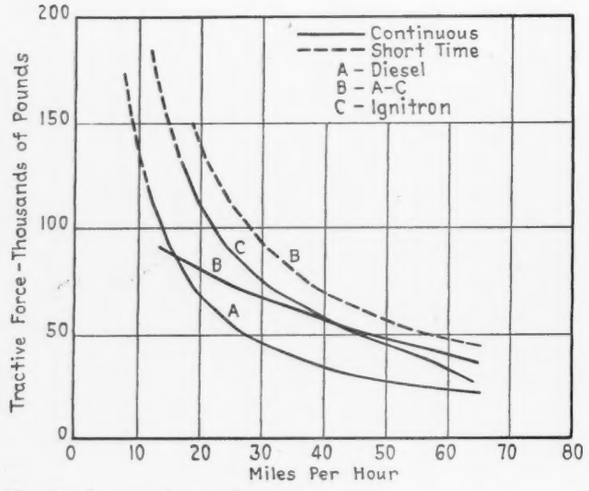


Fig. 2—Locomotive performance curves.

also frequent arc-backs. With the advent of World War I, the idea was temporarily shelved.

In the 1920's, an alternate solution was developed in the form of the motor-generator locomotive. Such a locomotive converts high-voltage a.c. power, collected from the trolley, to low-voltage d.c. by a locomotive-mounted a.c. transformer and synchronous-motor d.c. generator set. A number of such locomotives have been built and have proved successful in the low-speed, heavy-drag service for which they are particularly adapted. However, such locomotives are necessarily heavy and expensive.

It was the refinement of the Ignitron type of rectifier in 1932, followed by its extensive application during World War II in the production of aluminum and magnesium, which turned attention again to the possibilities of a rectifier locomotive.

The Ignitron locomotives have several outstanding advantages:

1. They are applicable to the a.c. trolley system with its high-voltage power supply.
2. They provide the same flexibility of control as the conventional a.c. locomotive, a control unequalled for a wide range of sustained horsepower output.
3. They secure the high sustained tractive force of d.c. traction motors.
4. They incorporate apparatus which is currently produced in large quantity.

Performance

Fig. 2 illustrates the performance of the Ignitron locomotive in terms of tractive force and speed in comparison with a standard three-unit, 4,500-hp. (3,700 rail hp.) diesel-electric locomotive in widespread use today, and with a two-unit, 5,625-hp. 25-cycle a.c. locomotive. Each of these locomotives has 12 axles with a traction motor on every axle. The motors on the diesel locomotive are the same as those used on the Ignitron locomotive. The a.c. motors are the most modern of the resistance lead type. The mechanical features of the a.c. motor locomotives are identical with the Ignitron locomotives.

These curves illustrate the fundamental differences in performance of three locomotive types and point up the advantages of the Ignitron rectifier type. It will be noted that the rectifier locomotive develops about 60 per cent more tractive force than the diesel-electric locomotive over the entire speed range. The a.c. locomotive has an

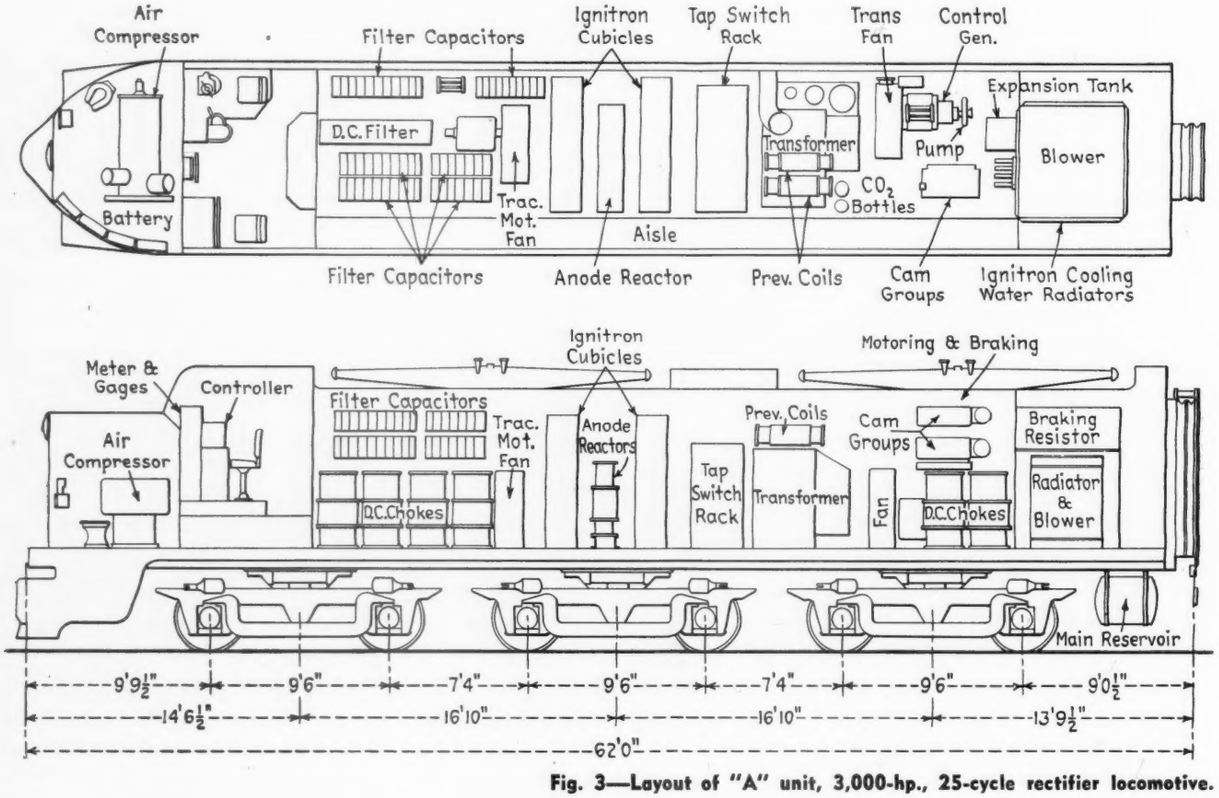


Fig. 3—Layout of "A" unit, 3,000-hp., 25-cycle rectifier locomotive.

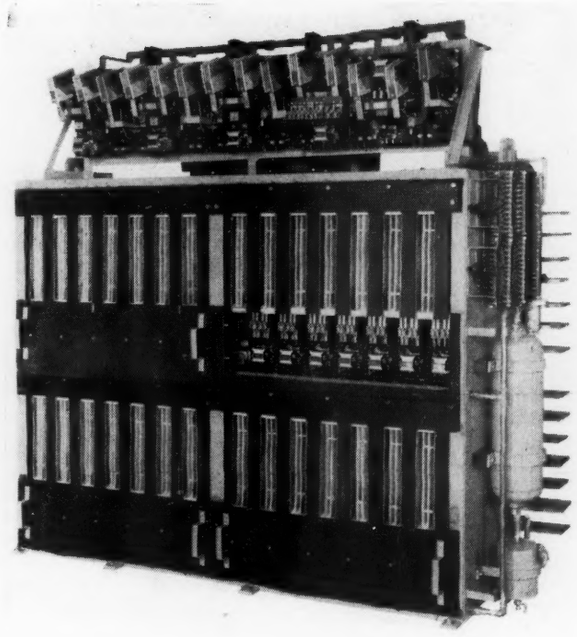


Fig. 4—Front view of tap switch rack.

Fig. 5—Ignitron cubicle.

advantage over both the rectifier and diesel-electric locomotive in the high-speed range, as shown, but it will be noted that in the low speed range it is the weakest. The rectifier locomotive produces continuously almost 50 per cent more tractive force in the low-speed zone.

The advantage of the a.c. locomotive in handling a short-time overload far in excess of its continuous rating is indicated. Actually, it is also possible to design for an equivalent overload with the rectifier system. However, there is no need for the added capacity since the continuous rating gives adequate performance in the low-speed range. The diesel-electric locomotive has a constant horsepower output, limited by the capacity of the diesel engine.

The information presented in these tractive force curves can be translated into ability to pull trains. Table 1 shows tonnages that can be hauled by the three types of locomotives under comparison. These are based on a typical railroad division and the speeds shown are for the ruling grade.

One of these Ignitron locomotives is equipped with two-axle trucks and the other with three-axle trucks, the purpose being to determine by service tests which type of truck will be the more suitable.

Transformer

The transformer is inerteen-insulated and cooled by means of an air-blown radiator. Its design is essentially the same as that of a conventional a.c. locomotive transformer except that the secondary has a center tap with accelerating taps on both sides of the center. Since only one-half of the secondary is used for each half cycle, the secondary winding is approximately 45 per cent larger than it would be for a single-phase series motor design. The inerteen is circulated by means of a pump built into the transformer tank. This transformer primary rates 4,200 kva. at 11,000 volts. The tank is "form fit" to minimize the volume of inerteen required.

The transformer secondary is provided with a midtap (d.c. return), and a series of accelerating taps on each side of the midtap. These taps feed anode busses through preventive coils. Each anode bus feeds an Ignitron tube through an anode circuit breaker and anode reactor. These two tubes supply full-wave rectified d.c. to a single traction motor. From each individual motor, the circuit continues through a d.c. choke reactor—which limits the ripple to approximately 30 per cent—a motor switch, and a cutout switch back to the midtap.

All six traction motors per "A" unit are similarly connected in parallel relation, in which connection slipping and spinning of drivers is minimized. In motoring there are 35 notches.

Phase delay of ignition to the tubes is used to increase the number of notches with a given number of transformer taps. This delay is varied up to 30 deg. in motoring and 50 deg. in braking.

When in operation the tap switch rack, Fig. 4, is entirely enclosed in a cubicle, except for the arc box openings. It is ventilated by approximately 3,000 cu. ft. per min. of air, which is expelled through the arc boxes. The contactors on the top of the box are starting and running contactors for the auxiliary motors and include a heater contactor.

The traction motors are Type 370-DZ, each rated 500 hp. These motors have six main and commutating poles. Both armature and field windings are silicone-insulated. Roller bearings are used on the armature shaft and sleeve bearings on the axles. These motors are the same as are used on Baldwin-Westinghouse and Fairbanks-Morse diesel road locomotives.

Auxiliaries and Ventilation

There are but three blower motors on each "A" unit. The traction motor blower ventilates the traction motors and supplies air for the windshield defrosters. It is a 1,450-r.p.m. induction motor, driving a No. 4½ B

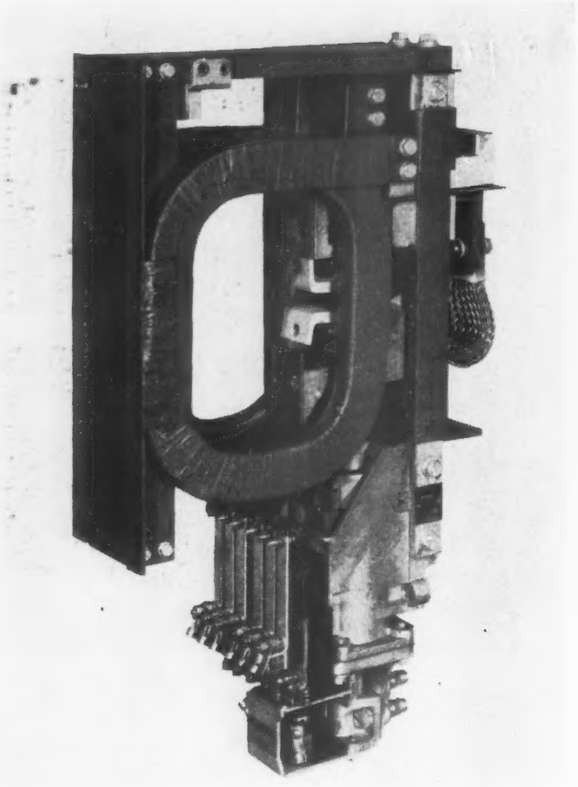


Fig. 6—Anode circuit breaker, arc box removed.

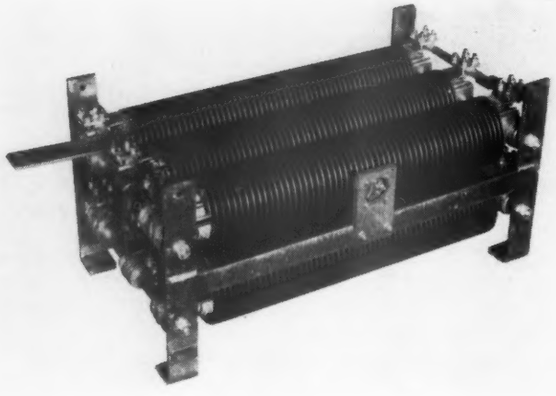


Fig. 7—Dynamic brake resistor for one traction motor armature.

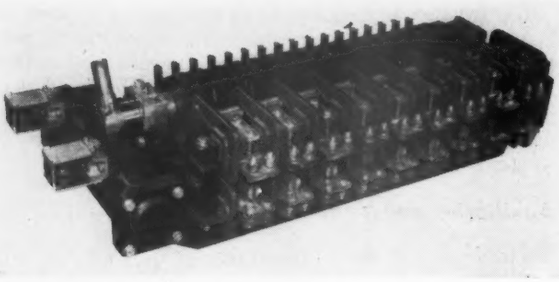


Fig. 8—Cam switch changeover group for motoring and braking.

Buffalo Forge Niagara Conoidal runner requiring 43 hp.

Ventilating air is carried through a duct in the underframe which feeds air into each two-axle truck through the center pin and from the bolster to each motor.

On the locomotive using three-axle trucks, air is fed to each motor by a sliding "high-hat" arrangement on the underside of the duct directly to the motors.

The transformer blower is driven by a motor-generator set. The motor of this set, which is rated 29 hp.. 1,450 r.p.m., also drives the control generator, a 45-volt, 60-amp. machine, and a centrifugal pump which circulates the cooling water for the Ignitron tubes. This blower ventilates the transformer radiator, the tap switch group, the d.c. chokes, and the motor reactors.

The radiators in the cooling system for the Ignitron tubes are ventilated by an induction blower motor rated 35 hp., 1,450 r.p.m. This motor drives an axiflow fan and draws air through the radiators and then passes the same air through the dynamic brake resistors mounted directly over the fan. The air is expelled through the roof. When dynamic braking is used, shutters are opened by a pneumatic cylinder to by-pass the radiators.

Ignitron Cubicles

There are two Ignitron cubicles per locomotive unit. Each Ignitron tube is supported by a resilient structure which holds the tube at approximately its center of gravity. The mounting structure itself is fastened to insulating bolts, thus leaving the cathodes insulated from ground. These tubes are standard except for some special mercury baffling. At the upper left (Fig. 5) there are three firing circuit controls, and at the upper right, six anode breakers. Each breaker must be capable of opening an arc-back on an Ignitron tube.

The most common trouble that has been associated with Ignitron tubes in stationary service has been with arc-backs. An arc-back occurs when a cathode spot forms on the anode and a short circuit results. In a multi-phase installation, the other phases feed power into this short and the result may be a current flow of 50,000 amp. or more. It is also possible for a d.c. load having stored energy in a shunt field to feed power back into the short.

While using single-phase for the railway application, no heavy arc-backs have been experienced in several years of testing in our laboratories and two years' operation of the experimental m.u. car. If an arc-back occurs, it is immediately extinguished at the next zero point on the voltage wave, and being a single-phase circuit. there is no other voltage present to re-ignite the arc independent of the ignitor itself. Since the load is composed of d.c. series motors, there is no possibility of reverse power from this source.

Protective apparatus is provided to short the ignitor circuit and open the anode breaker magnet valve circuit when an overload occurs. This results in the overload current being interrupted within the Ignitron tube because the overload trip operates in one-half cycle, and the anode breaker takes one and one-half cycles to open. Therefore, after an overload operation, the anode breaker opens without an arc. This anode breaker, shown in Fig. 7 with arc box removed, is a new design rated 1,200 amp., a.c. or d.c. It makes use of die cast parts instead of sand castings. It has air-core blowout coils. These have proved especially effective on d.c. because of no residual flux and on either a.c. or d.c. have the feature of forcing the arc to the center of the arc box instead of burning arc box sides. The front of the coils is braced against magnetic forces and vibration by the arc chute guide.

When the dynamic brake feature is used, the traction motor fields are excited by using two Ignitron tubes to

provide d.c. These two tubes then feed all motor fields in series through a stepped resistor and then through one of the d.c. chokes back to the midtap on the transformer.

Connected across each motor armature and commutating field is a braking resistor of fixed value. Fourteen notches in braking are obtained by the use of two taps on each side of the midpoint of the transformer secondary, by varying a series resistor, and by utilizing phase delay on the two Ignitron tubes.

The air brake is a combination of the 8-EL type with a DS-24 brake valve. The compressor is a Westinghouse Air Brake Company type 3-CD driven by an induction motor. During the starting period, the compressor is unloaded and pumps against pressure only after it is up to speed. At 750 r.p.m., each compressor supplies 222 cu. ft. per min. displacement.

Fire Protection

Carbon dioxide protection against fire is provided by four 50-lb. tanks of CO_2. The apparatus compartment in each "A" unit has a 6-ft. fire wall adjacent to the aisle to retain the gas when expelled around the electrical equipment. There are several discharge nozzles at strategic points. The blowers are shut down by the discharge of CO_2. While the transformer blower is slowing down, the reactors ventilated by this blower are filled with CO_2. The traction motor blower has its intake shut off completely when the CO_2 is discharged. Gas may be discharged at either side of the locomotive inside the cab or at either side of the locomotive from ground level.

TABLE 1—TONNAGE RATINGS FOR A TYPICAL RULING GRADE

12-Axle Locomotives

	Trailing Tons	M.P.H.
Rectifier	4,600	40
A.C. motor	4,700	40
Diesel	2,700	40
Rectifier	14,000	17
A.C. motor	9,000	17
Diesel	8,300	17

TABLE 2—PRINCIPAL DATA

Wheel arrangement	2 (B-B-B)	2 (C-C)
Line voltage, a.c.	11,000	11,000
Phase	single	single
Frequency	25	25
Number of driving axles	12	12
Weight—total, lb.	751,000	728,000
Weight on drivers, lb.	751,000	728,000
Weight per driving axle, lb.	62,500	60,666
Continuous rating at rail,		
Tractive force, lb.	132,000	132,000
Speed—m.p.h.	17	17
Adhesion—per cent	17.6	18.1
Starting Tractive Force, lb.		
25 per cent adhesion	187,750	182,000
Maximum operating speed, m.p.h.	63	63
Number of traction motors	12	12
Driving wheel diameter	44 in.	44 in.
Gear ratio	15:68	15:68
Air brake equipment	Type 8-EL with D-24 brake valve	
Number of compressors	2	2
Compressor air displacement—		
Total cu. ft. per min.	444	444
Type of control	Battery-electro-pneumatic	
Minimum curvature—Coupled to train	16 deg.	16 deg.
Minimum curvature—Locomotive only	21 deg.	18 deg. 30 in.
Length overall—between knuckles	124 ft.	124 ft.
Total wheel base	104 ft. 5 in.	104 ft. 5 in.
Rigid wheel base	9 ft. 6 in.	16 ft. 10 in.
Width overall	10 ft. 1½ in.	10 ft. 1½ in.
Height over pantograph locked down	15 ft.	15 ft.
Height over cab	14 ft. 7⅜ in.	14 ft. 7⅜ in.
Width over cab	9 ft. 10 in.	9 ft. 10 in.
Track gage	4 ft. 8½ in.	4 ft. 8½ in.
Coupler height	34 in.	34 in.
Clearance over rail—new wheels	5¼ in.	5¼ in.

"The St. Lawrence Waterway would increase the debt and tax burden of the nation and would feed the flames of inflation. For its great cost, direct and indirect, the United States would get a half-interest in a part-time waterway. It would be a waterway frozen over for more than one-third of the year and economically usable by only 4 per cent of U. S. ocean merchant shipping during the remainder of the time; a waterway which is not necessary to supply Great Lakes steel mills with essential iron ore, either in peace or in time of war; a waterway so highly vulnerable to enemy sabotage or air raid that the nation could not afford to rely on its continued operation in time of war. It would be a waterway which would not, and could not, be self-supporting through the collection of tolls—but a waterway, nevertheless, which would be harmful to essential United States industries and localities and the labor employed in them, as well as burdensome to United States taxpayers everywhere. The St. Lawrence Waterway, in short, is not a project in which the United States should sink the money of its taxpayers—now or in the future."—*Association of American Railroads.*

If a fire is not extinguished by the gas in the unit where the fire occurs, the gas from the other unit may be used by opening a cock at the rear end of the unit not in trouble.

In addition to the above, there are portable CO_2 extinguishers. At the time this article was written, the first of these two locomotives was undergoing tests preliminary to road acceptance tests by the railroad. These tests indicated that the locomotive had ample margin in both motoring and braking performance. The value of having all motors in parallel was demonstrated on one test when, because of oil on the wheel treads of the lightest-loaded axle, this axle continued to slip and balanced at a speed of 20 m.p.h., while the locomotive was running at 16 m.p.h. Consequently, no slip relays are provided.

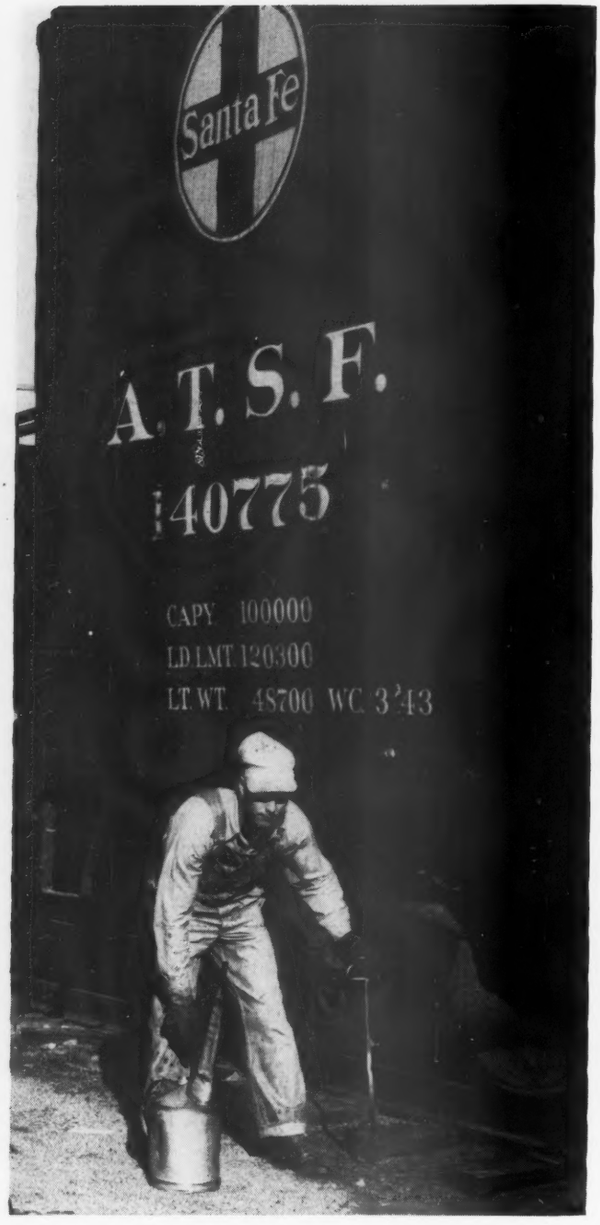
In order to meet a satisfactory delivery date on these two Ignitron locomotives and at the same time do some research work as to a.c. and d.c. filter requirements, it was thought best to build and equip the locomotives with the maximum size of filters that it was thought might be required. Then, at a later date, after tests had been made in service, any excess filter capacity would be removed. This decision resulted in a somewhat crowded layout. Our tests to date indicate that we can remove the d.c. filter and approximately one-half of the a.c. filter. This will result in more accessibility and remove some 11,000 lb. of capacitors and reactors.

Conclusion

Because these locomotives are just going into service, no operating results are yet available. Continued operation is expected to demonstrate the advantages of this type of locomotive on existing single-phase a.c. systems.

Its application is not limited, however, to 25-cycle operation, but it is equally adaptable to frequencies of 50 or 60 cycles. The principal deterrent to railroad electrification in this country is its high first cost. The ability of a rectifier locomotive to operate at commercial frequencies, as compared to a frequency of 25 cycles, necessitated by the limitations of a.c. motor design, offers the possibility of reducing electrification costs and widening the field in which it is economically justified.

The two locomotives which have been placed in service by the Pennsylvania are of interest not only because of their advantages as a new type of motive power in this particular application, but also in the potentialities they have for the extension of electrification in the future.



Are We Really Serious About HOT BOXES?

Are they caused by a lack of adequate measures for their prevention, or by a lack of willingness to face the issues?

With the current intense interest in hot boxes and what to do about them,* Railway Age *makes available — for the first time to the entire railroad industry—the following discussion by H. G. Moore, assistant general superintendent equipment of the Atlantic Coast Line, before the Southern & Southwestern Railway Club. Mr. Moore's discussion ties in closely with the articles on roller and plain bearings for freight cars published in our issues of December 31, January 7 and February 4.

In a recent address before a large body of mechanical officers, one of our higher railroad officers named hot journal boxes under freight cars the greatest single mechanical problem in recent years. I think each of us, as we examine our operating statistics, agrees that there is no greater single cause of train delays. It has often been said that the poorest engine delay record in the history of any railroad can hardly equal the train delays caused by the best hot-box record on that same railroad.

Aside from any mention of operating statistics, it is a plain fact that the railroads are losing business, experiencing costly derailments, and are endangering life as long as freight car journal boxes continue to become defective in such large numbers.

Numerous devices have been placed on the market and many practices have been put into effect, all with the end in view of reducing the many causes of hot boxes. Some of these devices are good and many of the practices are splendid. It is not my purpose here to discuss matters of this type. It is my purpose, on the other hand, to point out a number of factors which I feel that we, as mechanical officers of our railroads, are either ignoring or not giving their proper significance.

The waste-packed journal box has relatively few parts; namely, the journal, brass, wedge, waste and the box itself with its lid, dust guard and dust-guard plug. On the surface the maintenance of such a journal box should be very simple indeed; however, we seem to have entirely missed some of the most important features in this maintenance, hence the generally poor nationwide hot-box record.

Inspect After Switching Impacts

To begin with, it is common knowledge that switching impacts upset not only the packing but very often the brass and wedge, setting the stage for a hot box on the line of road. Despite all this, it is the practice in many yards over the country to service journal boxes on the inbound inspection. This has been pointed out repeatedly by the chief mechanical inspector of the Association of American Railroads and has been one of the topics in his reports for the past several years. On our railroad we have found that at numerous points immediate improvement was experienced in the number of hot boxes occurring between division points as our practice was revised to limit inbound inspection of journal boxes to detecting boxes operating at above normal operating temperature and dressing all packing down, where necessary, and making inspection of component parts on the outbound inspection.

Tests were performed at a number of our yards at both normal and excessive switching speeds which demonstrated this principle forcibly. We are also in the middle of an intensive program to reduce damage not only to lading but to journal-box packing adjustment which is caused by excessive switching speeds. We expect considerable help in our hot-box drive by this

activity, which is being participated in by other interested departments.

In two cases to my certain knowledge, railroads at one time furloughed every box packer and transportation-yard oiler in their employ without delegating this work to any other person. How, then could such a railroad expect any improvement in their journal-box performance without any attention being given boxes from the time interchanged to or loaded on their railroad to the time delivery was made? As long as such conditions exist, all of us must suffer whether we are sincere about improving our performance or not.

Raise Packing to A.A.R. Standards

We recently started a most intensive drive to furnish journal-box packing which was within the standards set by the A.A.R., and from the results of our numerous inspections we are convinced that too little attention is being paid this most important matter by all but a few roads. We have made thread counts of waste supplied us by manufacturers during the past year and have made a similar thread count of renovated waste supplied by the renovating companies which perform this work for our road. Needless to say, conditions revealed were shocking. We found, incidentally, that waste placed in journal boxes by other roads was, in all but a few cases, as bad as or worse than that found in our own boxes and our own repair tracks. Upon going further into the matter, we were unable to find any other road actually making the thread count as required by the A.A.R. specifications on either new or renovated waste.

Taking the matter still further and following suggestions made in the annual report by the chief mechanical inspector of the A.A.R., we made a drive to remove as much of the old packing consisting of short strands from our waste as possible. Based on the normal percentage of waste reclaimed, over the nation as a whole, it is possible for journal-box packing to remain in use under some conditions as long as 20 years.

Analysis of journal-box waste used by other railroads indicated that we were no worse and considerably better than many of the others. That we have been correct in our thinking along these lines is evidenced by the fact that a number of roads with good hot-box records have been replacing arbitrarily 50 per cent of the packing sent to their renovating plants. This has been brought to the attention of the A.A.R. and is now being handled by the appropriate committee.

Mechanical departments have used the term "waste grab" until our managements place this term in the category of an alibi. In tests on the Coast Line for the A.A.R. lubrication committee, it was proved conclusively that waste grabs can and will occur unless short strands are eliminated from packing and unless packing is dressed by competent oilers during the outbound inspection of the car. Practically every mechanical officer has read the annual inspection reports of the A.A.R., yet very little seems to have been done about it.

Journal Bearings and Wedges

The journal brass and its associated wedge are blamed for many more hot boxes than is actually the case. Much of the trouble with journal brasses can be eliminated if they are closely inspected for imperfections at the manufacturer's plant and are then handled carefully through shipping, storage and actual application to journals. Wedges do wear flat on the top but can be easily reclaimed by bumping out the middle section by use of dies to restore the original contour of the top without disturbing the seat on the brass. This method greatly reduces the cost of purchasing all new wedges for replacements.

Tests are being conducted on several railroads at the present time to determine whether the present A.A.R. car oil is satisfactory for the service. It is too early to comment on this; however, the Coast Line has run a number of tests on additives used in this oil and, although we are not in a position yet to state that these additives contribute to the hot-box problem, it is obvious to us that if they are not properly compounded with the base oil, difficulty along these lines can be expected. Some of these additives have the consistency of honey and they must be properly mixed to prevent trouble.

Many hot boxes are caused by improper workmanship or practices originating in wheel shops. I do not intend to go into this subject other than to say that such conditions *can* and by all means *should* be controlled and corrected when found to exist, in line with A.A.R. wheel-shop requirements.

Journal Failures

Now let us discuss axles: I believe all railroads have experienced broken and sprung journals, as I am sure that the broken journal is a malady which has no respect for individual railroads. The Coast Line has studied this problem for a number of years and has had the advantage of observing studies of other railroads along these lines. We are convinced that sprung journals can be reduced in number and broken journals eliminated almost entirely if the facts are faced squarely and something is done about them. Broken journals sometimes occur where absolutely no heat has been present in the journal box at the time of failure. We have definite cases recorded and I personally have examined journals where the finish has been as good as when it left the wheel shop, and where the packing and brass showed absolutely no signs of heat. In such cases there was no reduction in the diameter of the journal at the point of fracture.

We have other cases that vary from definitely sprung journals to evidence of circumferential cracks at point of fracture. In these cases the journals show signs of intense heat. Almost without exception such broken journals have been undersized, indicating that they have been turned in some railroad's wheel shop. This leads us to consider the possibility that cracks in the journal as a result of a previous hot box were not entirely removed by machining nor detected by magnaflux, magnaglo or visual inspection. Extensive research on the part of at least one railroad has developed that although a circumferential crack in the journal is entirely machined out, the structure of the metal under that crack is so affected as to result in a new fracture taking place at the exact location of the initial surface fracture.

Can Burned Journals Be Scrapped?

As we are in possession of such knowledge, would it not appear advantageous to scrap badly burned journals as they turn up at the wheel shop? Despite this evidence, little is being done in this connection, although the Coast Line has definitely established its policy in this regard. We scrap all burned journals coming into our wheel shop that belong to locomotives and our own passenger cars. We find, on questioning other railroad men, that this practice is in effect on a number of roads where system cars can be segregated from cars of other railroads' ownerships.

For our railroad, or any other railroad, to scrap burned journals under all cars would be too great a financial

burden to be borne by the individual railroad; to be equitable, this expense should be borne by all of the railroads in the country. It suffices to say that as long as wheel shops continue to machine badly burned journals and return such journals to service, we will experience broken journals. Here also we are accused of suggesting "too expensive" a practice.

Much has been said about old side frames becoming so worn in the roof of the box that a new wedge fits snugly in this recess and fails to rock in the manner intended in its design. We feel that this is of major importance but can be easily controlled by closer inspection by all railroads. Close inspection of side frames at terminals and repair tracks will reveal cracks, and other conditions which might result in serious derailment, to such an extent that the average railroad will be hard put to find enough side frames to keep cars in service without delay. Our needs for replacement truck sides run into carloads, all occasioned by tightening inspection on side frames at terminals and repair tracks.

Periodic Packing

I have said absolutely nothing about proper packing of journal boxes at the 12-month periodic packing periods, nor have I brought anything out in connection with the proper methods of dressing down packing at terminals. Although numerous arguments may be presented for this or that method of packing or cleaning boxes, all such practices are, in general, good, *if they are followed*. The trouble is in *not* following them. No one method nor any device used in journal boxes can be a panacea for hot-box troubles. Clean boxes, clean component parts of such boxes, as well as tight lids, dust guards and dust-guard plugs are a must if the railroads are to improve performance. All such practices are fairly standard and unless followed, any hot-box drive would be a sham.

Our inspection of boxes in yards proves to us beyond a shadow of a doubt that the average railroad, including our own, has a long way to go both in repacking boxes properly and in servicing boxes correctly. Needless to say, nothing that any one of us can do will correct this condition as long as the rest of us pay no attention to the method and materials employed. I personally have talked to many mechanical officers who have decried their hot-box records and lamented their many problems in this connection, yet they were taking no positive action to improve the bad situation.

Roller Bearings on the A.C.L.

As to the use of roller bearings in freight service, the Coast Line is among the roads having the largest percentage of roller-bearing-equipped freight cars in service and on order of all railroads in the country. We feel that roller bearings will pay for themselves—not so much by reducing hot boxes but by reducing labor in servicing bearings and a lesser cost for materials. Our experience indicates that it is possible to furnish grease-packed roller bearings that will operate without attention between air-brake cleaning dates and possibly wheel turnings.

When it is considered that the average waste-packed journal box has had its lid lifted thousands of times, packing dressed and free oil used at each inspection point, the savings are obvious. In addition, packing is renovated and brasses and wedges are replaced many times in a waste-packed journal box before the normal expected life of a roller bearing is over. We feel that it is entirely possible for a well designed roller bearing to last the life of a car without any cost other than that incurred by a replacement of the inner and outer races, together with necessary lubrication.

At present there are a number of designs of roller bearings on the market, each requiring its own design of axle, box and side-frame assembly. To this end, we have been pressing the manufacturers for a standard axle which will reduce inventory. Further, we have been pressing for a standard bearing which, along the same marketing practices experienced with couplers, will still further standardize and reduce inventories which must be carried to effect quick and efficient handling of cars.

Some Never Came Back

Our experience is probably the same as that of other roads where new cars leave our line, returning only when general repairs are necessary. As a matter of fact, we have cases on record where new cars built at plants off our line were destroyed after a number of years of service without ever reaching Coast Line rails. To equip such cars with roller bearings would be entirely charitable on our part and would result in the savings effected by roller bearings being contributed to the entire country, without sufficient economy being presented to the owning railroad to justify their installation. For this reason, we have applied roller bearings to pulpwood cars and phosphate cars operating almost entirely on our line and returning to our line after being made empty. We also own a fleet of refrigerator cars equipped with roller bearings which are suitable for high-speed passenger service. These cars were built during the latter part of 1947 and are used in service all over the country. Our experience with them has been most satisfactory up to the present.

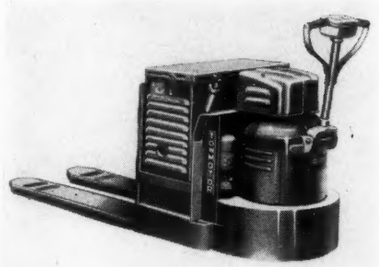
With the standard axle now becoming a possibility, in a few short years it will be practicable to replace wheel and axle assemblies containing wheel defects on roads over the entire nation, making roller bearing application much more attractive.

In addition, the Coast Line has a fleet of pulpwood cars equipped with roller-bearing boxes and pedestal type side frames having pedestal jaw openings the same as used in conventional passenger equipment. We understand that this installation is to be used by a number of other railroads in the very near future and will allow roller-bearing-equipped cars to be speedily repaired on any road by merely replacing the wheel and axle set with standard wheels and axles, replacing the journal boxes with standard passenger boxes, brasses, wedges and packing. The flexibility of this design, I feel, is obvious.

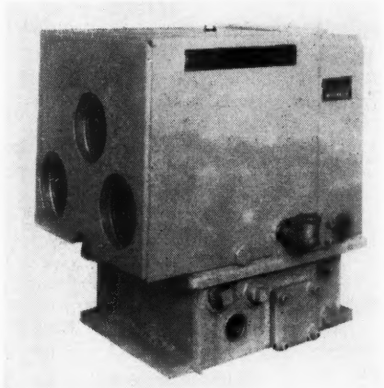
Foremen Alone Not Responsible

The improvement of conventional friction freight journal performance which mechanical officers must provide is not one which can be wholly affected by continually castigating car foremen and their inspection forces, even though we feel that the average car foreman is not turning in as good a performance as should rightfully be expected. The manner with which the average oiler faces his task is evidence of this. Supervision's fatalistic attitude toward hot boxes cannot be condoned. On the other hand, as long as we furnish poor materials to these men we can expect our share of the criticism which should be leveled against the performance. Further, as long as we consider the roller bearing in a class as a luxury item instead of an economical device designed to reduce transportation expenses, we have not played fair with our industry which looks to us for improvements in the service to combat constantly spiraling transportation costs.

New and Improved Products Of the Manufacturers



A built-in generator, developed by the Ready-Power Company, of Detroit, especially for the Model "W" electric truck produced by the Towmotor Corporation, Cleveland, has just been announced by Towmotor. The Ready-Power mechanism is mounted in the standard battery compartment, with gasoline engine, fuel tank, starting battery and all accessories completely enclosed in a steel housing.



Governor Replacement For Alco-GE Diesels

An improved locomotive governor which has been installed on Alco-GE 1600-hp. road locomotives for the past year may now be installed on earlier model locomotives through the use of an adapter kit.

The latest model governor has simplified electrical components and fewer moving parts. It represents design improvement resulting from experience gained in millions of miles of operation with earlier designs.

Nearly all expendable parts of the new governor are interchangeable with corresponding parts of the former design. The speed pilot valve and the fuel limit pilot valve have been made identical in design so that separate renewal parts stocks are no longer necessary. The valves may now be removed from the top of the governor as a unit.

External piping has been reduced by building the oil reservoir into the base of the unit, thus eliminating the separate oil reservoir formerly mounted on the floor of the locomotive. A visible reservoir sight glass replaces the old dipstick method of checking oil.

Electrical wiring has been simplified through the elimination of the governor-off switch, its function being served by another switch in the circuit.

Mercury Introduces Medium-Duty Electric Tractor

A new electric tractor rated at 400-lb. normal and 2,000-lb. maximum drawbar pull, when powered by specified 48-volt source, with a running speed of 7½ m.p.h. has been introduced by the Mercury Manufacturing Company of 4044 S. Halsted Street, Chicago, 9. The two-wheel drive unit, designated as Model A-545, has a four-wheel steering system with a "tiller-bar" control. Acceleration is manually controlled by a three-speed snap-action mechanical contactor unit, but foot acceleration is available where preferred.

Additional features of the new model include: cushion-type tires, semi-elliptical spring suspension, front and rear double-reduction spiral bevel and spur gearing, and unit-constructed power plant.

York Announces New Room Air Conditioners

The York Corporation, York, Pa., has announced that it has designed 1/3-hp. and 1-hp. window-sill type room air conditioners with a hermetically sealed refrigeration circuit for the 1952 air conditioning market.

John R. Hertzler, vice-president and general sales manager, stated that York has also refined five other room air conditioner models, including its ½-hp. and ¾-hp. window-sill type units and its 1-, 1½- and 2-hp. console types.

The 1/3-hp. unit, known as Model 4, is said to protrude only 10 inches into the room, and "can be installed in almost any type window." It is claimed to be the only 1/3-hp. air conditioner to have four-way adjustable air distribution grilles, and features heavy-duty, disposable type filters easily reached without having to remove the cabinet from its mountings. It is designed principally for small rooms, such as offices.

The other new window-sill type unit, the 1-hp., known as Model 51, was designed for handling large size rooms.

Models are available in two-tone tan and dark ivory finish.

A new motorized card file, with automatic push-button control, which is said to bring the section of the file desired to the operator in about three seconds, has been announced by Simplo Research & Manufacturing Co., New York 16. The machine has a filing capacity of 40,000 8 in. by 5 in. cards, 82,000 tabulating size cards or 90,000 5 in. by 3 in. cards, it is said.

G.M. & O. Adds Another Highway P.O. Route

The Gulf, Mobile & Ohio has switched local mail service between Chicago and St. Louis from local passenger trains to specially equipped highway post office buses. The move does not affect through Chicago-St. Louis mail which continues as heretofore in post office and storage cars on "express" and "limited" trains. Service to larger cities en route is likewise unaffected.

The highway post office buses are operated by the G.M.&O.'s highway subsidiary, the Gulf Transport Company, which has been operating a similar H.P.O. service parallel to some of the railroad's southern lines. The new service, however, is believed to be the first of its kind to be operated in the central midwest.

Buses, converted for the mail service at the Mobile (Ala.) shops of the transport company contain postal equipment essentially similar to that of an R.P.O. car. The mail is assorted by clerks while en route.

For the time being, the road's three affected local trains on the Chicago-St. Louis main line will continue to operate — but solely for the accommodation of passengers. All express, baggage and miscellaneous head-end traffic has been diverted to Gulf Transport trucks.

American University Plans Sixth Railroad Institute

The sixth Rail Transportation Institute conducted by the American University, Washington, D. C., in cooperation with the Association of American Railroads, will be held in Washington from March 4 through March 28. Dr. L. M. Homberger, professor of transportation at the university, will be in charge.

The institute will follow a program similar to those of its predecessors. Thus the courses will cover various phases of railroading, and current problems of all modes of transportation. There will also be field studies of rail, water, and air transport facilities in the Washington-Baltimore area.

Among those scheduled to lecture at the institute are E. H. Bunnell, Robert S. Henry, and Dr. Julius H. Parmelee, vice-presidents of the A.A.R., and Arthur H. Gass, chairman of the association's Car Service Division; L. W. Horning, vice-president, New York Central; P. M. Shoemaker, vice-president, Delaware, Lackawanna & Western; Daniel P. Loomis, chairman, Association of Western Railways; K. N. Merritt, vice-president, Railway Express Agency; and L. K. Sillcox, executive vice-president, New York Air Brake Company.

Interstate Commerce Commissioner J. Monroe Johnson will speak at one of the institute's two supper meetings, while the other will be addressed by Major General Carl R. Gray, Jr., administrator of veterans' affairs, who was director of the Military Railway Service during World War II. Students completing the course will be awarded certificates at the institute's closing dinner where an address on "The Mobilization of Transportation" will be delivered by Paul F. Royster, director, Office of Transportation, Department of Commerce.

The university's announcement said that students may be selected by their employers, and that others may apply by submitting information about their educational background and practical experience. No specific previous education is required, and there is no age limit.

Applications for admission should be addressed to Dr. Homberger, the American University, 1901 F Street, N. W., Washington 6, D. C. February 28 will be the last registration day. Tuition will be $125.

Waybill Studies

Waybill studies issued recently by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission include No. 5158, Mileage Distribution of Carloads for Each Commodity Class by Type of Car—Terminations in 1950: No. 5159, Weight Distribution of Carloads for Each Commodity Class by Type of Car—Terminations in 1950; and No. 5163, Quarterly Comparisons of Traffic and Revenue by Commodity Classes —Terminations in Second Quarter, 1947-1951.

Freight Car Loadings

Loadings of revenue freight in the week ended February 2 totaled 731,006 cars, the Association of American Railroads announced on February 7. This was an increase of 3,073 cars, or 0.4 per cent, compared with the previous week; an increase of 79,841 cars, or 12.3 per cent, compared with the corresponding week last year; and an increase of 118,542 cars, or 19.4 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended January 26 totaled 727,933 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, January 26

District	1952	1951	1950
Eastern	128,744	144,255	116,640
Allegheny	150,933	162,420	128,016
Pocahontas	62,756	61,275	48,788
Southern	135,956	140,263	119,667
Northwestern	70,877	83,545	64,819
Central Western	116,288	126,524	100,901
Southwestern	62,379	65,884	57,103
Total Western Districts	249,544	275,953	222,823
Total All Roads	727,933	784,166	635,934
Commodities:			
Grain and grain products	49,583	53,939	40,327
Livestock	8,583	8,891	8,415
Coal	160,443	163,204	119,759
Coke	16,211	16,208	12,946
Forest products	42,568	50,278	35,095
Ore	18,178	18,136	12,544
Merchandise l.c.l.	70,679	81,613	80,599
Miscellaneous	361,688	391,897	326,249
January 26	727,933	784,166	635,934
January 19	747,662	779,750	619,163
January 12	742,757	783,015	629,543
January 5	609,967*	662,427	505,753
Cumulative total 4 weeks	2,828,319	3,009,358	2,390,393

*Revised.

Thirty-Six Roads Awarded Amortization Certificates

Certificates of necessity authorizing accelerated amortization of facilities for tax purposes were approved for 36 railroads during the period from December 22, 1951, to January 18, 1952. The certificates were approved by the Defense Production Administration upon recommendation by the Defense Transport Administration.

Largest certificates in this group went to the Louisville & Nashville, the Southern Pacific, and the New York Central. The L.&N. was authorized to write off 70 per cent of a $39,181,200 investment over a five-year period. The S.P. was authorized to write off 55 per cent of $27,188,516 over the same length of time.

Two certificates, totaling $35,646,639, went to the N.Y.C. This includes a $23,146,639 certificate, 55 per cent of which may be written off in five years. The other certificate is for $12,500,000, and D.P.A. approved fast write-off of 70 per cent of this amount.

The percentage authorized for fast write-off in each case depends generally on the type of facility involved, amount of expansion required for the emergency, probable usefulness after the emergency, and the degree of financial aid deemed necessary to encourage the expansion, D.P.A. said.

Other roads for which certificates were approved, together with the amounts involved, are listed below; the percentage figure shows the percentage that can be written off in five years:

Charleston & Western Carolina, $2,737,966, 55 per cent.

Cuyahoga Valley, $600,000, 70 per cent.

Delaware, Lackawanna & Western, $3,717,036, 55 per cent.

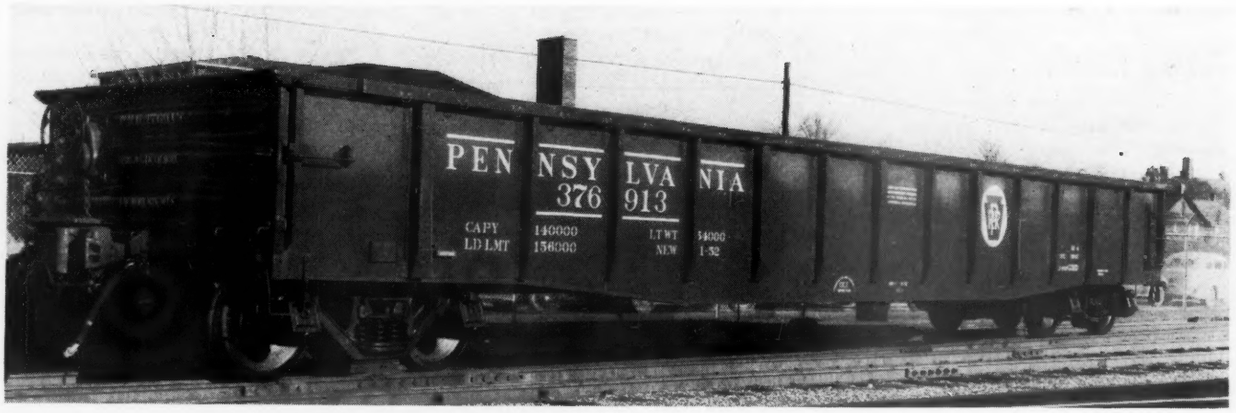
Elgin, Joliet & Eastern, $726,871, 55 per cent.

Erie, $6,425,000, 70 per cent.

Ft. Worth & Denver, $1,368,750, 70 per cent.

Great Northern, $135,000, 50 per cent; and $85,000, 70 per cent.

Houston Belt & Terminal, $1,300,000, 55 per cent.



ONE OF THE LAST OF A RECENTLY COMPLETED ORDER for 1,200 70-ton gondola cars placed with the American Car & Foundry Co. by the Pennsylvania. Built at A.C.F.'s Berwick, Pa., plant, the cars are of all-welded construction with fixed ends and wood floors. Sides are of the fish-belly type with straight center sill. Each car is 52½ ft. long.

Illinois Central, $288,661, 55 per cent; and $85,750, 70 per cent.

Illinois Terminal, $78,691, 55 per cent.

Lake Terminal, $1,980,000, 70 per cent.

Lehigh Valley, $3,898,944, 55 per cent.

Louisiana & Arkansas, $921,000, 55 per cent.

Macon, Dublin & Savannah, $139,414, 55 per cent.

Minneapolis & St. Louis, $342,540, 55 per cent; and $4,694,500, 70 per cent.

Montour, $1,363,743, 70 per cent.

Nashville, Chattanooga & St. Louis, $3,193,613, 55 per cent.

Newburgh & South Shore, $660,000, 70 per cent.

Norfolk & Western, $726,000, 70 per cent.

Northern Pacific, $4,386,450, 55 per cent; and $1,880,000, 70 per cent.

Pennsylvania, $4,519,400, 55 per cent; and $1,725,000, 70 per cent.

Peoria & Eastern (N.Y.C.), $2,717,221, 55 per cent.

Pittsburgh & Lake Erie, $1,077,000, 55 per cent; and $6,700,000, 70 per cent.

Pittsburgh & West Virginia, $1,184,820, 55 per cent.

Reading, $7,534,104, 55 per cent.

Richmond, Fredericksburg & Potomac, $853,607, 55 per cent; and $868,557, 70 per cent.

St. Louis Southwestern, $2,103,832, 70 per cent.

Spokane, Portland & Seattle, $1,205,361, 55 per cent.

Terminal Railroad Association of St. Louis, $1,128,014, 55 per cent.

Texas & Northern, $205,000, 55 per cent.

Texas & Pacific, $8,577,781, 55 per cent.

Union Pacific, $15,134,216, 55 per cent.

Yadkin, $150,000, 55 per cent.

New Haven to Discontinue Steam Power by April 27

Complete discontinuance of steam power by the New York, New Haven & Hartford will become effective with the road's spring timetable on April 27. The change will be made possible by delivery of 15 1,600-hp. diesel-electric road-switching units from the American Locomotive-General Electric Companies and eight 2,400-hp. passenger units from Fairbanks, Morse & Co. Delivery of these units will increase the New Haven's diesel fleet to 378, with total horsepower of approximately 500,000. Aggregate cost of the 378 units is $54,128,574.

The New Haven's change to diesel-electric power began with one experimental switching locomotive in 1931. Ten years later 10 road locomotives, said to be the first in the country which could be used interchangeably in road service for freight or passenger operation, were acquired. Each of those road units has traveled more than a million miles.

Between New York and New Haven, Conn., Danbury and New Canaan, the road is electrified, with 108 electric locomotives and a number of multiple-unit cars handling freight and passenger service in that area.

Midwest Shippers Find L. C. L. Service Improving

Considerable improvement in railroad l.c.l. service has been noted during the past few months by members of the Midwest Shippers Advisory Board. It was revealed at the board's Chicago meeting on January 30 and 31, however, that the improvement has been chiefly confined to service between larger cities within the board's territory. Truck service to many points within the same territory has fallen down, the board's l.c.l. committee reported, while the railroads are making progress in their efforts to effect further improvements.

A joint special events luncheon was held on January 31, together with the Traffic Club of Chicago, in honor of the past general chairmen of the Midwest Board. Also present at a table of honor were 16 presidents of railroads operating in the board's territory.

Robert S. Macfarlane, president of the Northern Pacific, spoke on "What Price Inequity?"—the effects of unequal regulation on the railroad industry. He suggested that existing competitive inequalities should be corrected, "but I do not mean that undue restrictive legislation should be imposed on the truckers, the air lines or the waterways. . . . Each should be permitted to serve without unreasonable restriction." Further, he suggested restoration of managerial discretion to the railroad industry, commenting: "Present competition is more than adequate to prevent any abuse of such power."

Speaking directly to the shippers present, Mr. Macfarlane called for their active assistance in attaining these suggested remedies: "Legislative action is necessary, and you men—to whom dependable, efficient transportation is a necessity—and only you men, can bring about the adoption of such legislation. The problem is one of education—education of our representatives in Congress—as to the nature and the importance of the problem."

New board officers were elected for the coming year. John T. Moore, assistant traffic manager of the International Harvester Company, at Chicago, was elected general chairman; M. I. Adams, traffic manager of Cutler-Hammer, Inc., Milwaukee, alternate general chairman; and C. R. Purcell, manager of the transportation department of the Quaker Oats Company, Chicago, general secretary.

RRs Must Prepare As If For War Itself—Faricy

"The only safe approach to the transportation problems of mobilization in so far as railroads are concerned is to prepare as if for war itself," William T. Faricy, president of the Association of American Railroads, told the Kiwanis Club of Montgomery, Ala., on February 5. To do this, he continued, calls for solutions to four major problems which must be solved if railroads are to meet present and future transportation demands.

These problems, as Mr. Faricy enumerated them, are how to obtain adequate revenues to have a healthy railroad system; what provision should be made for procurement of scarce materials essential to rail operations;

News Briefs . . .

. . . An all-time safety record for Great Northern employees was apparently established in 1951. General Safety Supervisor C. L. La Fountaine, basing his figures on the first 11 months and an estimate for December, finds the employee casualty rate was 4.50 per million man hours worked. This compares with 6.32 in 1950. The Dale Street shops, St. Paul, worked the entire year without a reportable injury.

. . . Following plans laid down in a special labor-management conference last December 17, a system-wide blood-donating campaign embracing all Chicago & Eastern Illinois employees got under way on January 18. Initially, traffic department employees in 38 on- and off-line offices throughout the country donated a pint of their blood to the armed forces through the American Red Cross. Subsequent stages of the campaign call for donations from yard and shop forces and from able-bodied members of their families, through Red Cross mobile units in major population centers along the line and a business car converted to facilitate blood collection in smaller on-line communities.

. . . The Baltimore & Ohio has inaugurated a management news letter written especially for the road's officers to keep them in close touch with policies and decisions of top management. Twelve hundred B. & O. officers, in all departments, receive the mimeographed news letter once a month or oftener. The first issue appeared in mid-January and the second on February 1.

what provisions should be made for necessary manpower without infringing on the Armed Forces, and whether railroads should be operated by private enterprise or by government.

Pointing out that low railroad earnings are one of the most serious problems faced by carriers during this period of mobilization, Mr. Faricy told how railroad wage rates have gone up more than 140 per cent and the cost of materials more than 130 per cent since 1939. On the other hand, he said, present rates produce an average revenue for hauling a ton of freight one mile which is less than 45 per cent above the average revenue received in 1939. Just since 1949, railroad annual operating costs for wages, materials and taxes have increased by more than $1,400,000,000, or 2½ times as much as the increase in annual revenues since 1949, the A.A.R. officer stated.

To remedy this situation, railroads have asked the Interstate Commerce Commission for authorization to increase freight rates 7.2 per cent, Mr. Faricy said. "It is essential that this increase be granted and that prompt action be taken on it, as the increased expenses it is designed to cover are already being paid, day by day."

Turning to the question of materials procurement, Mr. Faricy declared that railroads now have about 100,000 freight cars on order and that it is "very important those orders be filled as rapidly as possible consistent with other defense requirements of the nation." Large car shortages may be expected each fall, he said, until a sustained program of freight car construction can be supported by steel allocations.

Mr. Faricy said about one-fourth of railroad employees served in the Armed Forces during World War II, but that with the increasing number of young men in key positions on railroad rolls today, some system of deferment for essential employees for a reasonable time should be worked out.

Declaring that it is far better for the country for railroads to remain in private operation, Mr. Faricy cited the experience of World War I, when railroads were under government operation, as contrasted with World War II, when they were privately operated. Mr. Faricy explained that in World War I, railroads under government operation produced a loss to the government of an average of almost $2,000,000 each day, while in World War II railroads paid taxes averaging $3,000,000 a day. "This difference . . . was $5,000,000 every time the sun went down."

The government also made substantial increases in freight rates during World War I, while at the end of World War II freight rates were no higher than when the war began, Mr. Faricy concluded.

Equipment Depreciation Rates for N.Y.C., B. & O.

Equipment depreciation rates for the New York Central and the Baltimore & Ohio were among those prescribed by the Interstate Commerce Commission in recent sub-orders in the general proceeding — "Depreciation Rates for Equipment of Steam Railroad Companies."

The sub-order applicable to the N.Y.C. was 142-C, and the depreciation rates it prescribed for owned and leased equipment, respectively, are: Steam locomotives, 3.29 per cent and 2.85 per cent; other locomotives, 3.6 per cent and 3.79 per cent; freight-train cars, 2.7 per cent and 2.56 per cent; passenger-train cars, 2.92 per cent and 2.6 per cent; floating equipment, 2.75 per cent (no floating equipment leased); work equipment, 2.57 per cent and 3.01 per cent; miscellaneous equipment, 11.63 per cent and 8.96 per cent.

The sub-order applicable to the B.&O. was No. 175-A, and the depreciation rates it prescribed for owned equipment are: Steam locomotives, 3.0 per cent; other locomotives, 3.9 per cent; freight-train cars, 2.76 per cent; passenger-train cars, 2.53 per cent; floating equipment, 2.84 per cent; work equipment, 4.63 per cent; miscellaneous equipment, 10.33 per cent.

The B. & O. sub-order also covered equipment leased by that road from the Buffalo & Susquehanna and the Buffalo, Rochester & Pittsburgh. The prescribed rates on such equipment, respectively, are: Steam locomotives, 1.92 per cent and 2.69 per cent; other locomotives (B.R.& P.), 3.92 per cent; freight-train cars, 2.6 per cent and 2.43 per cent; passenger-train cars (B.R. & P.), 2.22 per cent; work equipment, 4.52 per cent and 4.51 per cent.

Report on Accident At Woodstock, Ala.

Reporting on its investigation of the head-end collision between the "Southerner" and the "Crescent," which occurred November 25, 1951, on the Southern, at Woodstock, Ala., the Interstate Commerce Commission has found that the accident was caused by failure to operate the "Southerner" in accordance with signal indications. Evidence summarized in the report showed that the "Southerner" failed to heed a signal set to hold it on a siding, and came onto the single-track main line in the path of the "Crescent."

There was also evidence to the effect that reflected sunlight might have distorted the aspect of the involved signal, which was of the one-unit dwarf searchlight type. Tests made after the accident indicated as much, but they also showed that the reflected light would have been white; and that it could not have produced a phantom proceed aspect of yellow or green.

The accident resulted in the death of 15 passengers and two employees—the engineman of the "Southerner" and a road foreman of engines who was riding the locomotive of the "Crescent." The injured totaled 68, including 52 passengers and 16 employees. The commission's report, No. 3437, was by Commissioner Patterson, and the investigation out of which it came was conducted by the Bureau of Safety.

Trains Streamlined

Both trains were streamliners, operated in New York-New Orleans, La., service. The "Southerner" was northbound train No. 48, while the southbound "Crescent" was being operated as Second 47, i.e., the second section of No. 47, the southbound "Southerner." The "Crescent" normally operates via the Louisville & Nashville between Montgomery, Ala., and New Orleans; but was detouring over the Southern's line because of a damaged bridge on the L.&N. line. It was being hauled by a Southern locomotive and operated by a Southern crew.

The line on which the collision occurred is part of the Southern's Alabama Great Southern division. Trains running over it are operated by signal indications supplemented by an intermittent inductive automatic train-stop system.

No. 48 consisted of a single-unit diesel-electric locomotive and eight cars, including a passenger-baggage car at the head end. Second 47 consisted of a two-unit diesel and 13 cars. All cars of both trains were of "lightweight steel" construction.

The dispatcher intended that No. 48 would take the siding at Woodstock to meet both First 47 and Second 47, and the routes were lined for these movements. The siding, 1.62 mi. in length, parallels the main track on the east. The searchlight-type dwarf signal governing northbound movements from the siding is located east of the siding, 270.5 ft. south of the north siding switch. The signal is designated 73LC. It is a controlled signal which is continuously lighted, and the related train-stop inductor is located 57.5 ft. south of the signal.

First 47 was standing on the main track when No. 48 entered the siding at the south siding switch. "Although not required by the rules in traffic control territory," the report said, "First 47 was displaying signals for a follow-section and the engineer sounded the proper engine whistle signal while No. 48 was entering the siding. This signal was acknowledged by the engineer of No. 48. . . .The engineer of No. 48 therefore knew that there was a second section of No. 47, although under the method of operation here in effect he had no means of knowing where he would meet that section."

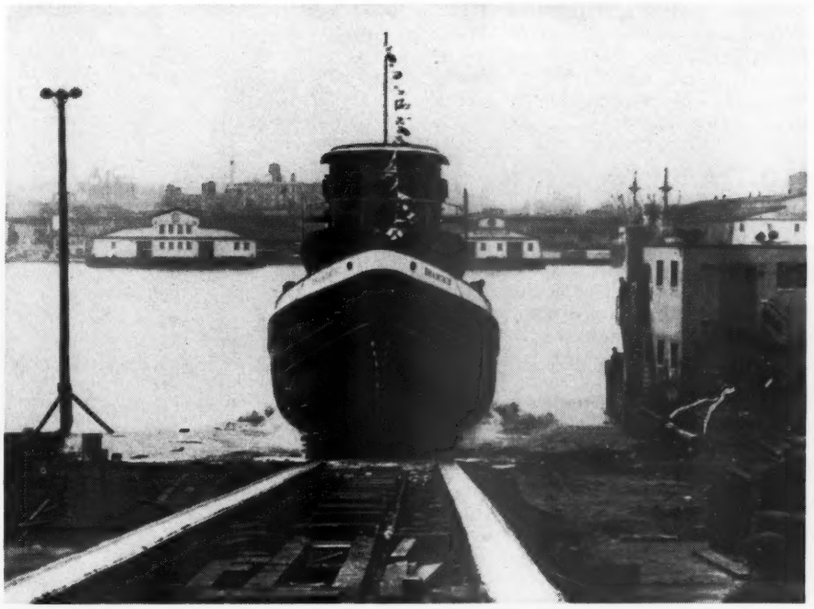
Passed "Stop" Signal

As the report described No. 48's run through the siding, that train "passed signal 73LC, which indicated 'stop,' trailed through the north siding switch while it was lined for main track movement, and stopped on the main track with the front of the diesel-electric unit 101 ft. north of the switch. About one minute later it was struck by Second 47."

The latter was traveling at an estimated speed of 45 m.p.h., its engineman having made an emergency application of the brakes when he realized that No. 48 was occupying the main track. The time of day was 2:35 p.m. The weather was "clear and the sun was shining brightly."

Having noted, as they were approaching the north siding switch, that this turnout was not in position for their movement to the main line, No. 48's engine crew knew that their train had fouled Second 47's track. So the firemen, as the commission put it, "immediately alighted. . .and proceeded northward to provide flag protection." And the engineman proceeded to a telephone booth, located west of the main track and 92 ft. south of his engine. He was killed "in the vicinity of the telephone booth" by equipment derailed as a result of the collision.

The derailed equipment included the locomotives of both trains, No. 48's first three cars and Second 47's first six cars. Most of the casualties occurred in No. 48's first car, which "was telescoped the full length of its passenger compartment" by the second car.



ANOTHER NEW TUGBOAT, the "Shamokin," shown here at its launching, is expected to join the Reading Railroad's New York harbor fleet before March 1. The "Shamokin," the third of its class to be built for the Reading at a total cost of more than $1 million, is 110 feet long and is powered by a 1,600-hp. Fairbanks-Morse opposed-piston diesel engine. It will operate principally out of Port Reading, N. J., towing coal barges to various points in the New York harbor area. It is equipped to operate as a fireboat or tug.

No. 48's fireman told the commission's investigators that he and that train's engineman thought signal 73LC was "clear" when their train was about 1,300 ft. south of that signal. When they noted subsequently that the north siding switch was not in position for their movement to the main track, the engineman applied the brakes in "first service position," and then in "full service position."

There was no emergency application of the brakes, and it was the commission's finding that "apparently" the train was stopped "by an application of the brakes initiated by the automatic train-stop system." Members of the crew estimated that the train's speed through the siding had been 15 m.p.h. This could not be checked because there was no recording tape in the locomotive's speedometer at the time.

"From the fact that the engine overran the switch a distance of 101 ft.," the commission said, "it is apparent that the speed was considerably in excess of 15 m.p.h." That was the speed limit through the switch.

Signal Tested

The report described in considerable detail the tests made after the accident, and the design of Signal 73LC. The tests showed that the signal and automatic train-stop systems functioned properly. The design of the signal was found to be such that "a phantom aspect conveying an indication to proceed cannot be produced by light from an external source." As noted above, however, the tests did indicate that "sunlight was reflected by the outer roundel" of the signal. The report continued to say:

"The reflected light was white . . .; it was not visible from the siding at distances greater than 800 ft. south of the signal. It was . . . more pronounced from the ground than from the cab of an approaching engine. From the cab of an approaching engine, the reflected light disappeared at a point about 400 ft. south of the signal, where the intended aspect could be clearly seen. . . . From the cab, the dwarf signal light could be seen at a distance of more than 2,000 ft. but no perceptible red appeared until the engine was within 800 ft. of the signal.

"The red in the aspect became more pronounced as the engine progressed northward. The automatic train-stop system initiated a brake application at the dwarf signal which stopped the train [traveling 15 m.p.h.] in a distance of 242 ft. During these observations and tests there was nothing developed which would indicate that the red aspect might have appeared to be either yellow or green. . . . While the dwarf signal . . . is adjusted for the short range view, there was a striking contrast at distances greater than about 800 ft. when the aspect of this signal was compared with the two lights of northward signal 73LA, governing movements on the main track, located between the siding and the main track and 76.5 ft. south of the dwarf signal. The lights of this signal were not diffused and appeared bright, with distinct color, at a distance of more than 2,000 ft. . . ."

On the basis of the statement made by No. 48's fireman, the commission

concluded that this employee and the dead engineman accepted the distorted indication of the dwarf signal as a proceed aspect, and "did not observe the signal after the red in the aspect became clearly distinguishable."

N.D.T.A. Changes Rules On Transportation Awards

Nominations for the National Transportation Award, which is presented annually for the most outstanding contribution to defense transportation, can now be made through trade associations, professional societies, and similar organizations, the National Defense Transportation Association, sponsor of the award, has announced.

Captain Ward T. Shields, USN, of the Military Transportation Committee of the Joint Chiefs of Staff, and chairman of the association's Awards Committee, said that forms to be used in making the nominations were being mailed to the principal trade associations in the transportation field.

"In the past," he said, "nominations had to be channeled through one of the Association's local chapters. By permitting nominations to be submitted by other organizations we believe we are providing for a complete survey of the country in order to insure that the most outstanding achievement of 1951 in the field of defense transportation is unearthed."

New York Court Upholds Truck Weight-Distance Tax

New York state's weight-distance tax on long-distance commercial trucking, adopted by the New York Legislature at its 1951 session, has been declared constitutional in a January 24 decision by Justice Harry E. Schirick, of the New York State Supreme Court. Justice Schirick also denied the truckers' motion for a temporary injunction to prevent collection of the tax pending a final decision on its constitutionality.

The tax went into effect last October 1, but its actual collection was postponed pending determination of its constitutionality under a suit brought by trucking interests. The state tax department is now expected, in view of Justice Schirick's decision, to proceed with collection of the tax, retroactive to October 1.

The truckers, however, have announced that they will appeal the decision to the State Court of Appeals and, if necessary, to the United States Supreme Court. They have declared that it "will ultimately cost $100 million yearly in higher prices," although the state itself expects to collect only from $12 million to $20 million per year from the tax. The tax ranges from 0.6 to 2.4 cents per mile on both New York and out-of-state trucks weighing more than 18,000 lb., with exemptions for mail, government and farm trucks and those operated exclusively in local service.

Subsequent to the action reported in the accompanying news story, another New York State Supreme Court Justice, Christopher J. Heffernan, issued an order restraining the state from collecting the tax, pending decision on its constitutionality by the state Court of Appeals. The restraining order was granted on condition that an appeal from Justice Schirick's decision by Mid-States Freight Lines, Inc., be argued at the March 10 term of the Appellate Division. Justice Heffernan ordered the truckers to post bond of $10,000 by February 12, to protect the state from any loss of revenue, and further stipulated that his restraining order applies only to those carriers that have complied with the law by filing monthly mileage tax returns and that continue to do so.

Evans Contributes to Materials Handling Center

On January 23, R. B. Evans, vice-president of the Evans Products Company, Plymouth, Mich., presented to Wayne University, of Detroit, in the name of his father, the late Col. E. S. Evans, a check for $5,000, to be used to establish what has been called the first "Materials Management and Research Training Center" in the nation. This gift was the first of five, which Evans will give to the university yearly.

The center will be established in the university's school of business administration as a result of recommendations made by a 28-man committee which included representatives of the American Materials Handling Society, the American Society of Mechanical Engineers, the Detroit Board of Commerce, the Society of Industrial Packaging & Materials Handling Engineers, the Materials Handling Institute, Inc., and the Michigan Industrial Training Council. The center, it is said, will offer a complete curriculum, including materials handling, packaging and loading, leading to an academic degree in the field.

Among other companies reportedly interested in the center are the Chrysler Corporation, General Motors Corporation, the Union Steel Products Company, the Leonard P. Reaume Company and the Acme Steel Company.

ORGANIZATIONS

Accounting Division Will Meet at Detroit June 11-13

The annual meeting of the Accounting Division, Association of American Railroads, will be held June 11-13 at the Book-Cadillac Hotel, in Detroit. This was announced in a January 16 circular issued by the division's chairman—J. W. Severs, vice-president of the Chicago, Milwaukee, St. Paul & Pacific.

The announcement said that the customary "open house" meetings of the division's principal committees will be held on June 10, the day before the meeting opens. E. H. McCauley, general auditor of the Detroit, Toledo & Ironton, is chairman of the committee on arrangements for the meeting.

At its recent sixth annual meeting, the **Women's Traffic Club of Cleveland** elected the following officers: President — Myrtle Jones, Lakewood Storage, Inc., first vice-president — Mrs. Barbara Rahotini, Oliver Corporation; second vice-president — Betty Busch, Baltimore & Ohio; recording secretary — Marie Croft, Republic Steel Corporation; corresponding secretary — Marian Simon, Chicago, Milwaukee, St. Paul & Pacific; and treasurer — Mildred Pesta, Elmer C. Breuer Company.

R. G. Williams, freight traffic agent of the Monon, at Indianapolis, has been elected vice-president of the Beta Upsilon (Indianapolis) chapter of **Delta Nu Alpha** transportation fraternity. Other officers of the chapter are: President — Allen S. Hart, Gospel Trumpet Company, Anderson, Ind.; first vice-president — George R. Templin, U. S. Rubber Company, Indianapolis; treasurer, Kermit F. Eisenbarth, Ford Motor Company, Indianapolis; and secretary, William H. Robinson, Indiana Farm Bureau Cooperative, Indianapolis.

The **Women's Traffic Club of New York** will hold its regular dinner meeting on February 19 at the Park Sheraton Hotel, at 7 p.m. Miss Dorcas Campbell, assistant vice-president and director of public relations of the East River Savings Bank, will be the guest speaker.

The **Southern Association of Car Service Officers** elected the following officers at its 28th annual meeting, held on January 23 and 24, at New Orleans, La.: President, E. Sandlin, car accountant, Central of Georgia, Savannah, Ga.; vice-president, K. H. Durant, superintendent of car service, Birmingham Southern, Fairfield, Ala.; and secretary-treasurer, F. I. Umhau, superintendent of car service, Southern, Atlanta, Ga.

Charles S. Baxter, chairman of the Railroads' Tariff Research Group, will speak on the subject "Wanted, Big Men," at the 30th annual dinner of the **Miami Valley Traffic Club** on February 14. The dinner will be held in the Grand Ballroom of the Dayton Ohio Biltmore Hotel.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

THE FIRST OF 1,500 NEW 70-TON ORE CARS for the Duluth, Missabe & Iron Range was posed for this picture before it left the Michigan City, Ind., plant of the Pullman-Standard Car Manufacturing Company. The car's length is only 19 ft. 1 in. Delivery of order is expected before May 1.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—T. R. Stanton, acting secy.-treas., 1450 Railway Exchange Bldg., St. Louis 1, Mo. Annual meeting, June 3-5, 1952, Antlers Hotel, Colorado Springs, Colo.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C.R.R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, June 4-6, 1952, Hotel Sherman, Chicago, Ill.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—C. A. Melin, P. O. Box 5025, Cleveland 1, O. Annual meeting, October 6-8, 1952, Buena Vista Hotel, Biloxi, Miss.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 15-17, 1952, Conrad Hilton Hotel, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—R. O. Robertson, Chesapeake & Ohio, C. & O. Building, Huntington 1, W. Va. Annual meeting, May 12-14, 1952, Chateau Frontenac, Quebec, Can.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 11-13, 1952, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—T. J. Zirbes, Jr., Rock Island Lines News Digest, La Salle Street Station, Chicago 5, Ill. Annual meeting, October 1952, Santa Fe, N. M.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N. W., Washington 6, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Spring meeting and Committee Week, March 3-7, 1952, Hotel Statler, Cleveland, O.

Annual meeting, June 23-27, 1952, Hotel Statler, New York. (Includes Exhibit of Testing Apparatus and Related Equipment and biennial Photographic Exhibit.)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y.

Railroad Division — E. L. Woodward, *Railway Mechanical and Electrical Engineer*, 79 W. Monroe St., Chicago 3, Ill.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—W. A. Penrose, 839 Seventeenth St., N. W., Washington 6, D. C. Annual meeting, April 22-24, 1952, Hotel New Yorker, New York.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 Federal Reserve Bank Bldg., Cincinnati 2, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo. Annual meeting, October 14-16, 1952, San Francisco, Cal.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department—J. H. Aydelott, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—A. H. Grothmann, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 21-23, 1952, Edgewater Gulf Hotel, Edgewater Park, Miss.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, May 14-16, 1952, Netherland Plaza Hotel, Cincinnati, O.

Medical and Surgical Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 31, 1952, Drake Hotel, Chicago, Ill.

Protective Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, May 6-8, 1952, Hotel Schroeder, Milwaukee, Wis.

Safety Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 3-5, 1952, Hotel Statler, New York.

Engineering Division.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 11-13, 1952, Palmer House, Chicago, Ill.

Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 29-October 1, 1952, Chateau Frontenac, Quebec, Can.

Mechanical Division.—Fred Peronto, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 24-26, 1952, Fairmont Hotel, San Francisco, Cal.

Electrical Section.—59 E. Van Buren St., Chicago 5, Ill.

Purchases and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C. Annual meeting, June 2-4, 1952, Palmer House, Chicago, Ill.

Freight Claim Division.—C. C. Beauprie, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 2-4, 1952, Hotel Statler, New York City.

Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, June 10-13, 1952, Book-Cadillac Hotel, Detroit, Mich.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.

Traffic Department.—Walter J. Kelly, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS.—Miss Sarah F. McDonough, Executive Secretary, 2218 I.C.C. Building, Washington 25, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—C. J. Hoy, Pennsylvania, Union Station, Chicago 6, Ill.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Gulf, Mobile & Ohio R. R., 104 St. Francis St., Mobile 5, Ala. Annual meeting, June 10-13, 1952, Mount Royal Hotel, Montreal, Quebec.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—L. R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, P.O. Box 162, Montreal 3, Que. Regular meetings, second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—D. W. Kramer, Relay Depot Mail Room, East St. Louis, Ill. Regular meetings fourth Tuesday of each month, except June, July and August, Hotel DeSoto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—W. H. LaMon, Chicago, Burlington & Quincy, Downers Grove, Ill. Regular meetings, second Monday of each month, except June, July and August, LaSalle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. C. Rochester, Canadian National, 891 Notre Dame St. West, Montreal 3, Que. Next meeting, May 1-2, 1952. Morrison Hotel, Chicago, Ill.

EASTERN CAR FOREMAN'S ASSOCIATION. — W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February, March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark.

MAINTENANCE OF WAY CLUB OF CHICAGO.—E. C. Patterson, 400 W. Madison St., Chicago 6, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, which is third Monday, at Eitel's Restaurant, Field Bldg.

MASTER BOILER MAKERS' ASSOCIATION. — A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John S. Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in February, April, October, and December. Next meeting, February 28, 1952, Hotel Shelburne, New York.

MILITARY RAILWAY SERVICE VETERANS.—Carl N. Rydin, 622 Railway Exchange, Chicago 4, Ill.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Austin L. Roberts, Jr., 7413 New Post Office Bldg., Washington 4, D. C.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—C. L. Denk, Jr., Fulton Bag & Cotton Mills, 170 Boulevard Elsas, S.E., Atlanta 3, Ga. Annual meeting, October 7-9, 1952, Hotel Jefferson, St. Louis, Mo.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Miss Lois E. Casavant, 930 F St., N. W., Washington 4, D. C. Annual meeting, October 27-29, 1952, Hotel Statler, New York.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE. — Edward F. Lacey, 909 Kass Bldg., Washington 5, D. C.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—R. A. Carr, 375 Merchandise Mart Plaza, Chicago 54, Ill. Lewis Thomas, Asst. Secy., 59 E. Van Buren St., Chicago 5, Ill. Exhibit in conjunction with A.R.E.A. meeting, March 10-13, 1952, The Coliseum, Chicago, Ill.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION. — R. S. James, Denver & Rio Grande Western, Rio Grande Building, Denver 1, Colo.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—C. T. Stansfield, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION.—G. H. Wells, Northern Pacific Railway, St. Paul 1, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

NORTHWEST LOCOMOTIVE ASSOCIATION. — R. M. Wigfield, Northern Pacific Ry., Room 1134, G. O. Bldg., St. Paul 1, Minn. Regular meetings, third Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — S. E. Byler, 121 E. Sixth St., Los Angeles 14, Cal. Regular meetings, second Thursday of each alternate month at Sir Francis Drake Hotel, San Francisco, Cal., and Elks' Temple, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 614 Pittsburgh Life Bldg., Pittsburgh 22, Pa. Regular meetings, fourth Thursday of each month, except

June, July, August, September and December, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION. — J. McC Price, Allen-Bradley Company, 445-447 N. LaSalle St., Chicago 10, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Van Buren St., Chicago 5, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION. — A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION. — G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section of A.A.R.

RAILWAY TIE ASSOCIATION. — Roy M. Edmonds, 1221 Locust St., St. Louis 3, Mo. Annual meeting, September 3-5, 1952, Roosevelt Hotel, New Orleans, La.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 15-17, 1952, Conrad Hilton Hotel, Chicago, Ill.

ST. LOUIS RAILROAD DIESEL CLUB.—F. C. Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3, Mo. Regular meetings, second Tuesday of each month, Hotel York, St. Louis, Mo. Dinner, 6:45 P.M., meeting, 8 P.M.

SIGNAL APPLIANCE ASSOCIATION. — G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A.A.R. Signal Section.

SOUTHEASTERN RAILWAY DIESEL CLUB. — H. W. Brewer, Seaboard Air Line, Jacksonville, Fla. Regular meetings, second Tuesday in February, April, June, August, October and December, 9:30 a.m., Mayflower Hotel, Jacksonville, Fla.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB. — A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—F. I. Umhau, Southern Ry., Atlanta 3, Ga.

TORONTO RAILWAY CLUB.—J. A. North, P.O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July, and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5, Ill.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1, Ill. Meetings scheduled for February 18, March 17, April 21, May 19, 1952. Hotel Sherman, Chicago, Ill.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—A. B. Olson, 210 South Canal St., Chicago 6, Ill. Regular meetings, 12:15, first Wednesday of each month, except July and August, Traffic Club, Palmer House, Chicago, Ill.

W. E. Bikle, who has returned to the Standard Railway Equipment Manufacturing Company as assistant vice-president at Chicago, after being on loan to the Railroad Equipment Division of the National Production Authority. Before going to Washington, he was assistant vice-president of Standard at New York, and has been with the company and its predecessors since 1921.

H. M. Arrick, who has been appointed district sales manager in St. Louis for the Armco Steel Corporation, succeeding N. L. Pierson, retired. Mr. Arrick joined Armco in 1927 as a sales engineer and from 1937 to 1945 was district sales manager at St. Louis for a subsidiary company. In the latter year, concurrently with absorption of the subsidiary by the parent company, Mr. Arrick was appointed assistant district sales manager.

SUPPLY TRADE

Andrew Wityk has been appointed general superintendent of the **Frontier Railway Maintenance Company,** in charge of contract negotiations and purchasing, with headquarters in Niagara Falls, N. Y.

Michael J. Kearins has been elected president of **J. H. Williams & Co.,** Buffalo, N. Y., succeeding **A. D. Armitage,** who becomes chairman of the board, a newly created position.

P-W Specialties Corporation, Chicago, has appointed the following sales representatives for the Klasing Automatic Slack Adjuster: **S. W. Sargent,** Philadelphia; **Henry W. Stahl,** New York; **Harry E. Hyslop,** president of the Hyslop Brothers, Inc., Chicago; **Clyde Hyslop,** western sales manager, Hyslop Brothers, Inc., San Marino, Cal.; and **Harry P. Kelker,** manager of Walter E. Day, San Francisco.

E. M. Converse, senior vice-president of the **Dearborn Chemical Company,** Chicago, has retired, in keeping with company policies, but will continue to serve the company "as necessary." Mr. Converse joined Dearborn in 1902. He worked in the laboratory until 1908, when he was transferred to the sales department as water treatment engineer at Chicago. In 1918 he was appointed director of the specialty department. He became a director of the company in 1929 and in the following year was named also

J. W. Mohler, assistant director of sales for Caterpillar Tractor Company, has been appointed deputy director of the Construction Machinery Division of the N.P.A.

W. S. Zeigler, who was formerly manager of the eastern sales division of the Caterpillar Tractor Company, has now been appointed assistant director of sales.

J. A. Justeson, formerly assistant manager of the western sales division of the Caterpillar Tractor Company, who has just been named manager of the same division.

Frank McNamara, who was district representative on the west coast for the Caterpillar Tractor Company, has recently been appointed divisional assistant.

industrial department manager, coincidentally with the merging of the industrial product divisions under one department. In 1934 he was elected vice-president and in 1949 was given

E. M. Converse

the title of senior vice-president. Mr. Converse was responsible for development of the company's "No-oxid" rust preventive coatings and wrappers.

OBITUARY

Edwin F. Lankes, eastern region supervisor of the Detrex Corporation, died on January 22.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Ford Motor Company's** steel division has ordered 100 70-ton 40-ft. steel gondola cars from the Greenville Steel Car Company.

The **New York, Chicago & St. Louis** has ordered 200 70-ton steel covered hopper cars from the Greenville Steel Car Company. The cars will be used primarily for carrying bulk commodities such as cement, lime, soda ash and feldspar.

Nine hundred **Western Pacific** refrigerator cars which have been leased to the **Pacific Fruit Express Company** will be completely reconstructed in P.F.E's Roseville (Cal.) shops, at a cost to the W.P. of $3,755,000. The cars — most of which are reaching retirement age — will be given steel frame superstructures, new electric air-circulating fans and other modern features to make them equivalent to new cars from the service standpoint. The companies expected to start the project immediately, but difficulties in obtaining necessary materials will probably delay work until August. It is anticipated, however, that all 900 cars will be returned to service early in 1953.

SIGNALING

The **Baltimore & Ohio** has ordered equipment from the General Railway Signal Company for installation of a remote control interlocking at Brook, Pa. The control machine will be located in Confluence, Pa.

The **Chesapeake & Ohio** has ordered equipment from the General Railway Signal Company for installation of a relay interlocking at Wayne, Mich., and Plymouth; and for remote control, using Syncrostep, at South Lyon, Mich.

The **Chesapeake & Ohio** has ordered from the Union Switch & Signal Division of Westinghouse Air Brake Company material to replace a mechanical interlocking with an all-relay interlocking at Beaver Jct., Ky. The new interlocking will be controlled from the existing Big Sandy-Beaver Jct. C.T.C. control machine at Ashland, Ky., division headquarters, 90 miles north of the interlocking. In addition to material required for the control machine changes, the order includes code and carrier equipment, M-23A dual-control electric switch machines, relays, rectifiers, housing, etc. Field installation will be handled by railroad forces.

The **Cincinnati, New Orleans & Texas Pacific** has ordered equipment from the General Railway Signal Company for installation of a traffic control system between Harriman, Tenn., and Boyce, 96.5 miles. The control machine will be located at Somerset, Ky.

The **Cleveland, Cincinnati, Chicago & St. Louis** has ordered equipment from the General Railway Signal Company for installation of a car retarder system at Sharonville, Ohio; for remote control, using Syncrostep, at Middletown, Ohio, and Springfield; and for a remote control interlocking at Ansonia, Ohio.

The **Delaware & Hudson** has ordered equipment from the General Railway Signal Company for installation of centralized traffic control between Waterford Junction, N. Y., and Ballston Spa, approximately 20 miles. Control machines at Mechanicsville and Saratoga will be expanded to handle the additional territory.

The **Duluth, Winnipeg & Pacific** has ordered equipment from the General Railway Signal Company for installation of an automatic interlocking at Virmont, Minn.

The **Minneapolis, St. Paul & Sault Ste. Marie** has ordered equipment from the General Railway Signal Company for installation of remote control, using Syncrostep, at Glenwood, Minn.

The **Nashville, Chattanooga & St. Louis** has ordered equipment from the General Railway Signal Company for revision and addition to the present "NX" electric interlocking at Howell, Ga.

The **Norfolk & Western** has ordered equipment from the General Railway Signal Company for installation of a car retarder system with automatic switching at Lamberts Point, Va.

The **Southern** has ordered equipment from the General Railway Signal Company for installation of a remote control interlocking at Leeds, Ala.

ABANDONMENTS

Application has been filed with the I.C.C. by:

HUNTINGDON & BROAD TOP MOUNTAIN.—To abandon seven branch-line segments, totaling 12.9 miles, in Bedford and Huntingdon counties, Pa.

Division 4 of the I.C.C. has **authorized:**

COLORADO & WYOMING VALLEY.—To abandon a portion of its Southern division, from a point adjacent to Weston, Colo., to the end of the line at Tercio, 11.6 miles.

PEORIA TERMINAL COMPANY.—To abandon operation over a 3.6-mile rail line from Hollis, Ill. (4 miles south of Peoria), to Crescent Mine No. 1. The mine has been closed. The Peoria, Hanna City & Western, a terminal company subsidiary, owns the segment, and will abandon it.

SOUTHERN PACIFIC.—To abandon a 15.4-mile segment of its Riverdale branch, from a point near Riverdale, Cal., to Armona.

CONSTRUCTION

$3.5 Million Program For Indiana Harbor Belt

Extensive improvements totaling $3.5 million will be undertaken immediately at Blue Island classification yard of the Indiana Harbor Belt (a subsidiary of the New York Central).

The work will include construction of additional yard tracks, an auxiliary hump lead, a new car repair layout, a new yard office building, rearrangement of the car retarder and switch control systems, installation of a second eastbound main track between the yard and Dolton, Ill., with automatic block signaling, and other incidental changes.

An important link in the Chicago Switching District, the Blue Island yard classifies eastbound traffic received from western line connections. The improvements will enable the road to expedite both military and civilian

traffic while at the same time realizing greater operating economies. The "I. H. Belt" connects with 28 other railroads in the Chicago area. It has been fully dieselized for over a year and is currently expanding the capacity of its yard at Gibson, Ind. (*Railway Age*, August 6, 1951, page 87).

Atchison, Topeka & Santa Fe.—The firm of Barrett & Hilp, of San Francisco, has been awarded a contract to rearrange portions of the existing freighthouse at 4th and Michigan streets, Block 454, China Basin, San Francisco. The work will include construction of a 27-foot addition to the north end of the freighthouse.

FINANCIAL

Chicago & Eastern Illinois.—*Acquisition.*—The Illinois Central and Missouri Pacific have intervened before the I.C.C. to say they will not oppose the pending C.&E.I. proposal for acquiring the Jefferson Southwestern (*Railway Age*, January 14, page 232). The J.S. is an 11.6-mile line between Mt. Vernon, Ill., and Nason.

Illinois Central.—*New Director.*—Howard H. Rath, president of the Rath Packing Company, Waterloo, Iowa, has been elected a member of the board of directors. He fills the vacancy caused by the resignation of his late father, John W. Rath, a member of the board of directors since 1938.

New York, Ontario & Western.—*Application for Sale.*—Trustees of this company, which has been in receivership since 1937, have filed an application with the federal district court at New York, asking for approval of two contracts for sale of the railroad. Judge Edward A. Conger has scheduled a hearing on the proposed contracts for February 20.

The application states that Robert A. Nordblom, a New York City real estate investment and industrial broker, would buy the entire 542-mile railroad, including equipment and property, except for the Kingston, Port Jervis and Monticello branches, which aggregate 76 miles. These latter lines would be sold to Lincoln Epworth, a New York attorney. They are presently owned, except for one short section, by two N.Y.O. & W. subsidiaries, the Ellenville & Kingston and the Port Jervis, Monticello & Summitville.

Each purchaser would form a corporation to assume obligations imposed by the contracts, consisting largely of municipal real estate taxes in New York and New Jersey, sums owed to New York state for grade crossing eliminations, back wages to employees, and traffic balances owed to other railroads. Funds for the latter would be raised through bonds to be secured by a first mortgage lien on the railroad.

The new corporations would undertake to continue operation of the railroad, with the one which buys the main line investing new capital therein. The application proposed $10 million capital stock of one of the corporations would be distributed to the refunding mortgage bondholders of the present N.Y.O. & W. Similar provisions, so far as applicable, would be included in the contract for sale of the Kingston-Port Jervis-Monticello lines.

The purchase price was not estimated, the application stating that it could not be determined at this time.

Owasco River Railroad.—*Acquisition.*—The I.C.C. has authorized this road to acquire and operate a 0.87-mile segment of rail line at Auburn, N. Y. The segment was formerly owned by the International Harvester Company, but the I.H.C. has abandoned operation of its Auburn plant. Other firms are now locating in the area, and this trackage has been offered to the Owasco for the nominal sum of $1. The Owasco is owned jointly by the New York Central and the Lehigh Valley.

Reading.—*Merger of Subsidiary.*—This road and the Little Schuylkill Navigation, Railroad & Coal Co. have filed a joint application with the I.C.C., seeking approval of a merger plan under which the Reading would absorb the smaller road. The L.S. owns about 30 miles of main line between Tamanend, Pa., and Port Clinton, but has been operated as a part of the Reading system since 1863. First preferred stock of the Reading would be offered in exchange for outstanding shares of the L.S., and the latter's stock would be cancelled. The merger is expected to result in savings and is designed further to simplify the Reading's corporate structure.

United Railroads of Yucatan.—*Employees Ask Nationalization.*—Employees of this company (Ferrocarriles Unidos de Yucatan) are reported to have petitioned the Mexican government to buy out a British minority interest for 30 million pesos ($3,742,000), and rebuild the line, as part of a program to develop Yucatan as a resort area. The government already holds 51 per cent of the railway stock; the balance is largely owned by British investors, while the road is operated under various concessions, most of which will revert ultimately to the Mexican government. The company operates some 600 miles of railroad, mostly 3-ft. gage, in the Mexican state of Yucatan; principal cities served are Merida, where the railroad is headquartered, Campeche, and the port of Progreso.

Western Pacific. — *Refrigerator Car Agreement.*—A contract signed with the Pacific Fruit Express Company — in addition to providing for reconstruction of 900 W.P. refrigerator cars (see Equipment and Supplies — Freight Cars) — provides for continuation of the previous relationship between the railroad and the car line with respect to ownership and operation of refrigerator cars. The new contract again provides that the W.P. lease its refrigerator cars to P.F.E., in return for which the car line works directly with shippers in regard to furnishing, diversion and routing of the cars.

New Securities

Application has been filed with the I.C.C. by:

CHESAPEAKE & OHIO.—To assume liability for $8,250,000 of equipment trust certificates, to finance in part 25 diesel-electric locomotive units and 1,060 freight cars costing an estimated $10,407,341. The equipment is as follows:

	Description and Builder	Estimated Unit Cost
5	4,500-hp. freight locomotives, each consisting of two "A" units and one "B" unit (Electro-Motive Division, General Motors Corporation)	$503,440
5	1,600-hp. road-switching units (American Locomotive-General Electric Companies)	184,451
5	1,200-hp. switching units (Electro-Motive)	105,261
200	70-ton gondola cars (General American Transportation Corporation)	7,158
200	50-ton box cars (Pullman-Standard Car Manufacturing Company)	5,832
175	70-ton hopper cars (American Car & Foundry Co.)	5,989
485	70-ton hopper cars (A.C.F.)	5,729

The certificates, dated March 1, would mature in 30 semiannual installments of $275,000 each, beginning September 1, 1952. They would be sold on competitive bids, with the interest rate to be set by such bids.

CHICAGO & EASTERN ILLINOIS.—To assume liability for $2,100,000 of series I equipment trust certificates, to finance in part 485 new freight cars. Included are 385 50-ton hopper cars, built by Pressed Steel Car Company at $5,365 each, and 100 50-ton box cars, built by the Eastern Illinois Equipment Company at $5,625 each. The certificates, dated February 1, would mature in 30 semiannual installments of $70,000 each, beginning August 1, 1952. Subject to commission approval, the issue has been awarded to Salomon Bros. & Hutzler on the basis of that firm's bid of 99.566 with interest at 3⅛ per cent.

DULUTH, MISSABE & IRON RANGE.—To issue an $8,000,000 note to the United States Steel Corporation, proceeds from which will be used partially to finance acquisition of 1,500 70-ton steel ore cars. The Pullman-Standard Car Manufacturing Company will build the cars at approximately $6,935 each. The note, with interest at 3 per cent, would be payable in 10 semiannual installments of $800,000 each.

SOUTHERN.—To assume liability for $5,850,000 of series SS equipment trust certificates, to finance in part 49 diesel-electric locomotives costing an estimated $7,312,500.

	Description and Builder	Estimated Unit Cost
23	1,600-hp. road-switching locomotives (American Locomotive-General Electric Companies)	$166,000
16	1,500-hp. road-switching locomotives (Electro-Motive Division, General Motors Corporation)	154,500
10	1,200-hp. switching locomotives (Baldwin-Lima-Hamilton Corporation)	102,250

The certificates, to be dated March 15, would mature in 30 semiannual installments of $195,000 each, beginning September 15, 1952. They would be sold by competitive bids, with the interest rate to be set by such bids.

Division 4 of the I.C.C. has **authorized:**

ILLINOIS NORTHERN.—To issue four promissory notes, totaling $550,000, to the four roads which own I. N.'s capital stock. The notes will evidence loans which the four roads made in connection with I.N.'s acquisition of six locomotives during 1951. The notes with interest at 2 per cent, will go to the Atchison, Topeka & Santa Fe; Chicago, Burlington & Quincy; Pennsylvania, and New York Central (*Railway Age*, January 14, page 236).

NEW YORK CENTRAL.—To assume liability for $8,850,000 of equipment trust certificates, to fi-

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nance in part acquisition of 95 diesel-electric locomotives costing an estimated $11,912,000 (*Railway Age*, January 21, page 56). Division 4's report approved sale of the certificates at 99.66 with interest at 3⅜ per cent—the bid of Halsey, Stuart & Co. and 16 associates—which will make the average annual cost of the proceeds to the applicant approximately 3.46 per cent. The certificates, dated February 1, will mature in 15 annual installments of $590,000 each, beginning February 1, 1953. They were reoffered to the public at prices yielding from 2.4 to 3.45 per cent, according to maturity.

OAHU RAILWAY & LAND CO.—To issue 56,960 shares of $20 par common stock. The shares will be used by Oahu in absorbing Young Brothers, a firm operating tugs and barges between points in Hawaii. Stockholders of Young Brothers will receive the Oahu shares in direct exchange for their present Y.B. holdings (*Railway Age*, January 14, page 236). Oahu operates switching facilities and tracks connecting with piers at Honolulu.

UNION (Pittsburgh).—To issue an unsecured promissory note of $2,350,000 to the United States Steel Corporation, proceeds from which will be used to finance in part one diesel-electric locomotive and 380 70-ton gondola cars. Total cost of this equipment is estimated at $2,386,191. The note, with interest at 3¼ per cent, will mature in 20 semiannual installments of $117,500 each. Division 4 deferred action on the road's request for authority to issue two additional notes of $700,000 and $925,000, respectively. Proceeds from these notes would be used to finance in part 120 additional gondola cars and nine diesel-electric locomotives. The road expects to acquire the gondolas in February and the locomotives in March (*Railway Age*, January 7, page 70).

Security Price Averages

	Feb. 5	Prev. Week	Last Year
Average price of 20 representative railway stocks	55.92	57.76	60.79
Average price of 20 representative railway bonds	94.44	91.65	100.18

Dividends Declared

ATLANTA & CHARLOTTE AIR LINE.—$4.50, semiannual, payable March 1 to holders of record February 20.

CLEVELAND & PITTSBURGH.—4% special guaranteed, 50c, quarterly; 7% regular guaranteed, 87½c, quarterly both payable March 3 to holders of record February 8.

GREEN BAY & WESTERN.—common, $5, payable February 21 to holder of record February 7; income debentures A, $50 payable February 21; income debentures B, $10, payable February 21.

ILLINOIS CENTRAL.—6% non-cumulative convertible series A preferred, $3, semiannual, payable March 1 and September 2 to holders of record February 11 and August 6.

MAINE CENTRAL.—5% preferred, accumulative, $2.50, payable March 1 to holders of record February 15.

SOUTHERN.—(common).$1, payable March 15 to holders of record February 16; 5% non-cumulative preferred, $1.25, quarterly, payable March 15, June 14 and September 15 to holders of record February 15, May 15 and August 15.

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways

(Switching and Terminal Companies Not Included)

Income Items	United States For the month of September 1951	1950	For the nine months of 1951	1950
1. Net railway operating income	$75,724,640	$122,955,546	$589,700,766	$680,351,677
2. Other income	15,356,194	22,849,587	165,810,262	170,244,100
3. Total income	91,080,834	145,805,133	755,511,028	850,595,777
4. Miscellaneous deductions from income	4,653,008	4,044,322	42,472,929	34,670,701
5. Income available for fixed charges	86,427,826	141,760,811	713,038,099	815,925,076
6. Fixed charges:				
6-01. Rent for leased roads and equipment	7,619,518	13,440,637	82,728,328	91,034,051
6-02. Interest deductions[1]	25,196,708	25,084,460	224,495,854	225,452,135
6-03. Amortization of discount on funded debt	246,889	233,430	2,135,719	1,988,525
6-04. Total fixed charges	33,063,115	38,758,527	309,359,901	318,474,711
7. Income after fixed charges	53,364,711	103,002,284	403,678,198	497,450,365
8. Other deductions	3,109,724	3,583,906	28,095,751	29,093,006
9. Net income	50,254,987	99,418,378	375,582,447	468,357,359
10. Depreciation (Way and structures and Equipment)	40,900,933	36,867,333	336,478,254	319,716,025
11. Amortization of defense projects	4,386,012	1,368,408	34,250,978	12,335,877
12. Federal income taxes	52,551,476	81,420,421	378,751,299	342,584,638
13. Dividend appropriations:				
13-01. On common stock	11,386,349	14,788,788	148,899,111	123,104,723
13-02. On preferred stock	1,580,832	1,341,893	69,082,211	46,637,731
Ratio of income to fixed charges (Item 5 ÷6-04)	2.61	3.66	2.30	2.56

Selected Expenditure and Asset Items	United States Balance at end of September 1951	1950
17. Expenditures (gross) for additions and betterments—Road	$247,258,087	$194,427,219
18. Expenditures (gross) for additions and betterments—Equipment	752,080,302	573,685,804
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	464,668,549	462,695,759
20. Other unadjusted debits	122,682,518	109,833,948
21. Cash	843,289,756	973,738,249
22. Temporary cash investments	855,489,603	981,096,309
23. Special deposits	71,687,406	114,939,281
24. Loans and bills receivable	2,035,388	1,050,257
25. Traffic and car-service balances—Dr.	51,942,516	52,828,330
26. Net balance receivable from agents and conductors	181,877,466	172,034,859
27. Miscellaneous accounts receivable	394,045,462	346,988,095
28. Materials and supplies	911,829,925	697,389,690
29. Interest and dividends receivable	13,453,317	13,862,612
30. Accrued accounts receivable	216,782,988	204,676,299
31. Other current assets	33,474,039	35,059,511
32. Total current assets (Items 21 to 31)	3,575,907,866	3,593,663,492
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$165,264,086	$149,528,944
41. Loans and bills payable[3]	3,771,220	1,920,369
42. Traffic and car-service balances—Cr.	107,985,959	113,069,326
43. Audited accounts and wages payable	561,763,617	490,540,265
44. Miscellaneous accounts payable	203,685,622	226,834,100
45. Interest matured unpaid	39,290,230	41,179,564
46. Dividends matured unpaid	18,449,686	20,091,047
47. Unmatured interest accrued	77,151,280	75,363,084
48. Unmatured dividends declared	19,074,121	16,646,475
49. Accrued accounts payable	236,997,743	183,529,822
50. Taxes accrued	831,171,827	752,972,970
51. Other current liabilities	92,177,985	92,482,879
52. Total current liabilities (Items 41 to 51)	2,191,519,290	2,014,629,901
53. Analysis of taxes accrued:		
53-01. U. S. Government taxes	624,380,260	556,026,399
53-02. Other than U. S. Government taxes	206,791,567	196,946,571
54. Other unadjusted credits	316,959,356	285,205,865

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

RAILWAY OFFICERS

EXECUTIVE

Paul M. Zeis has been appointed executive assistant vice-president—accounting and finance of the AKRON, CANTON & YOUNGSTOWN at Akron, Ohio.

J. M. Prickett, vice-president in charge of labor and public relations of the KANSAS CITY SOUTHERN at Kansas City, Mo., retired on January 31, after 47 years of railroad service.

Leonard H. Murray, assistant to the president of the DULUTH, SOUTH SHORE & ATLANTIC, has been elected vice-president and secretary, with headquarters as before at Minneapolis, succeeding **P. L. Solether,** whose death was reported in *Railway Age* January 21.

William S. Trowbridge, vice-president—finance of the BOSTON & MAINE, at Boston, has retired at his own request, after 34 years of service. Born at Pawling, N. Y., on January 11, 1880, Mr. Trowbridge entered railroad service in June 1895 with the New York Central & Hudson River (now

William S. Trowbridge

N.Y.C.) as clerk, subsequently becoming bookkeeper. In June 1911 he joined the Boston & Albany and served as assistant auditor and auditor, suc-

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MAJOR manufacturers of diesel locomotives use Met-L-Wood doors and exterior side panels for the same reasons, listed at right, that make Met-L-Wood the ideal construction material for many additional railroad uses. Interior panels, bulkheads, heading, wainscoting, doors, luggage shelves, cabinets, table tops, baggage-car messenger accommodation units...All gain beauty, strength and utility when they are made lighter with Met-L-Wood.

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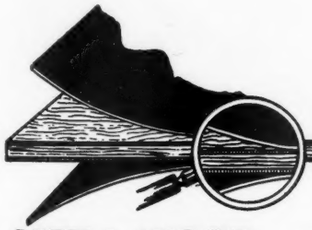

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Joseph H. Wright, general counsel of the Illinois Central, has been elected also vice-president, with headquarters as before at Chicago.

cessively, at Boston. Mr. Trowbridge went to the B.&M. in 1918 as comptroller, and was appointed vice-president in charge of finance in March 1930.

FINANCIAL, LEGAL & ACCOUNTING

William M. Moloney, attorney of the GULF, MOBILE & OHIO, has been named a general attorney, with headquarters as before at Mobile, Ala.

As previously reported in *Railway Age*, **Henry L. Walker** has been appointed general solicitor of the SOUTHERN at Washington, D. C. Mr. Walker attended George Washington University and received his LL.B. degree from Georgetown University at Washington. He entered the service of

Henry L. Walker

the Southern in December 1927 as a law assistant at Washington and was appointed solicitor in October 1932 and assistant to general counsel in September 1940. Upon his return from wartime service with the U.S. Navy in October 1945, Mr. Walker was named general attorney. On January 1, 1947, he was appointed assistant general solicitor and on July 28, 1950, he became assistant general counsel.

William F. Hanlon, general attorney of the CENTRAL OF NEW JERSEY, has been appointed general solicitor, with headquarters as before at New York, succeeding **Alexander H. Elder,** who retired on February 1, after a 35-year career with the C.N.J. **Richard J. Lally,** commerce counsel, has been appointed assistant general counsel; **Earl J. Harrington,** assistant general solicitor, has been appointed commerce counsel, and **Donald R. Colvin,** an attorney with the road since 1950, has been appointed assistant general solicitor.

Mr. Elder was born at Moncton, N. B., on October 8, 1883, and attended Harvard College (A.B. 1907) and Harvard Law School (LL.B. 1910). From 1911 to 1917 he served as attorney and chief of the Bureau of Inquiry of the Interstate Commerce Commission. During federal control he became assistant general counsel of the C.N.J., and was appointed general solicitor in 1923.

OPERATING

F. E. Rafferty, whose promotion from trainmaster of the CHICAGO GREAT WESTERN at Clarion, Iowa, to superintendent at St. Paul, was announced by

F. E. Rafferty

Railway Age in an earlier issue, started his railroad career as brakeman in 1928. He was promoted to conductor in 1936, and in 1948 became trainmaster at Rochester, Minn. He was transferred to Clarion in 1949.

W. K. Weaver, Jr., trainmaster of the Chicago division of the CHESAPEAKE & OHIO at Peru, Ind., has been appointed assistant superintendent of the Clifton Forge division at Clifton Forge, Va., succeeding **E. T. Rucker,** who has been appointed superintendent at Huntington, W. Va. **K. E. Stephenson** has been appointed terminal trainmaster at Ashland, Ky., succeeding **G. E. Childers,** who has been appointed trainmaster of the Lexington subdivision at Ashland.

W. R. Allen, who has been appointed superintendent of the Central division of the ST. LOUIS-SAN FRANCISCO at Ft. Smith, Ark., has been with the Frisco since 1936, beginning as a

W. R. Allen

trainman. Subsequently, he became safety supervisor, terminal trainmaster at Memphis, and assistant superintendent of the Northern division at Neodesha, Kan. He became assistant superintendent at Tulsa in 1950.

R. F. Murphy has been appointed trainmaster of the Waycross district of the ATLANTIC COAST LINE at Waycross, Ga. **E. E. Lambert** has been appointed trainmaster of the Birmingham district at Birmingham, Ala.

As reported in *Railway Age* recently, **N. N. Hopkins** has been appointed superintendent of the Eastern division of the MISSOURI PACIFIC at Kansas

N. N. Hopkins

City, Mo. Mr. Hopkins entered railroad service with the M.P. in 1920 as a clerk in the station office at Bebee, Ark. After filling various clerical positions, he became agent for the

(Continued on page 90)

OPERATING REVENUES AND OPERATING EXPENSES OF CLASS I STEAM RAILWAYS

Compiled from 127 monthly reports of revenues and expenses representing 131 Class I steam railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF NOVEMBER 1951 AND 1950

Item	United States		Eastern District		Southern District		Western District	
	1951	1950	1951	1950	1951	1950	1951	1950
Miles of road operated at close of month	225,861	226,206	53,246	53,331	45,900	46,033	126,715	126,842
Revenues:								
Freight	$743,295,620	$710,808,023	$267,376,027	$253,977,086	$157,587,960	$143,423,763	$318,331,633	$313,407,174
Passenger	71,795,361	65,884,507	38,673,210	35,444,908	9,983,487	8,982,831	23,138,664	21,456,768
Mail	[1]44,129,690	[2]42,752,338	13,335,174	10,596,448	6,119,645	6,827,408	24,674,871	25,328,482
Express	7,758,658	8,138,278	2,546,020	3,168,842	1,326,390	1,415,669	3,886,248	3,553,767
All other operating revenues	36,884,377	34,617,825	16,379,924	15,635,607	6,391,071	5,544,881	14,113,382	13,437,337
Railway operating revenues	903,863,706	862,200,971	338,310,355	318,822,891	181,408,553	166,194,552	384,144,798	377,183,528
Expenses:								
Maintenance of way and structures	118,114,490	113,314,485	42,098,626	44,443,227	25,169,851	22,475,524	50,846,013	46,395,734
Depreciation	11,282,019	11,009,874	4,658,528	4,607,609	2,092,640	1,991,455	4,530,851	4,410,810
Retirements	3,709,626	2,347,050	568,598	1,290,023	1,687,888	273,234	1,453,140	783,793
Deferred maintenance	*358,534	*57,811	*66,346	21,649	*292,188	*21,891	.....	*57,569
Amortization of defense projects	140,757	115,979	80,198	11,207	33,883	43,335	26,676	61,437
Equalization	425,235	616,794	1,219,452	1,117,870	*838,811	*1,169,824	44,594	668,748
All other	102,915,387	99,282,599	35,638,196	37,394,869	22,486,439	21,359,215	44,790,752	40,528,515
Maintenance of equipment	167,016,974	151,030,856	69,148,490	65,438,371	33,963,386	28,450,331	63,905,098	57,142,154
Depreciation	26,828,637	25,476,984	10,149,753	9,443,123	5,769,126	5,631,894	10,909,758	10,401,967
Retirements	*152,983	*98,419	*25,824	*25,332	*56,737	*7,269	*70,422	*65,818
Deferred maintenance and major repairs	*735,102	*166,443	*733,205	*71,632	*1,897	*9,450	.....	*85,361
Amortization of defense projects	5,445,219	1,012,130	2,515,134	361,408	1,810,013	210,095	1,120,072	440,627
Equalization	*176,551	*2,681,907	59,337	*885,522	*320,228	*480,577	84,340	*1,315,808
All other	135,807,754	127,488,511	57,183,295	56,616,326	26,763,109	23,105,638	51,861,350	47,766,547
Traffic	17,805,847	15,737,955	5,939,280	5,077,609	3,771,654	3,412,155	8,094,913	7,248,191
Transportation—Rail line	333,657,038	306,978,057	139,341,636	130,163,138	59,340,687	53,787,771	134,974,715	123,027,148
Miscellaneous operations	10,350,596	8,885,635	3,766,507	3,232,011	1,472,558	1,278,411	5,111,531	4,375,213
General	25,537,150	22,660,692	9,896,103	8,884,219	5,530,170	4,681,335	10,110,877	9,095,138
Railway operating expenses	672,482,095	618,607,680	270,190,642	257,238,575	129,248,306	114,085,527	273,043,147	247,283,578
Net revenue from railway operations	231,381,611	243,593,291	68,119,713	61,584,316	52,160,247	52,109,025	111,101,651	129,899,950
Railway tax accruals	118,825,113	119,209,878	31,310,906	31,089,225	30,464,370	27,350,902	57,049,837	60,769,751
Pay-roll taxes	23,480,896	22,887,908	9,532,210	9,559,217	4,532,521	4,266,589	9,416,165	9,062,102
Federal income taxes†	66,204,686	68,770,892	11,169,674	11,307,273	19,209,086	17,107,931	35,825,926	40,355,688
All other taxes	29,139,531	27,551,078	10,609,022	10,222,735	6,722,763	5,976,382	11,807,746	11,351,961
Railway operating income	112,556,498	124,383,413	36,808,807	30,495,091	21,695,877	24,758,123	54,051,814	69,130,199
Equipment rents—Dr. balance	13,901,001	11,410,178	6,034,660	5,513,465	*287,406	*1,393,476	8,153,747	7,290,189
Joint facility rents—Dr. balance	3,647,026	3,098,787	1,872,194	1,237,960	491,855	442,355	1,282,977	1,418,472
Net railway operating income	95,008,471	109,874,448	28,901,953	23,743,666	21,491,428	25,709,244	44,615,090	60,421,538
Ratio of expenses to revenues (percent)	74.4	71.7	79.9	80.7	71.2	68.6	71.1	65.6

FOR THE ELEVEN MONTHS ENDED WITH NOVEMBER 1951 AND 1950

Item	United States		Eastern District		Southern District		Western District	
	1951	1950	1951	1950	1951	1950	1951	1950
Miles of road operated at close of month	225,935	226,435	53,275	53,349	45,944	46,097	126,716	126,989
Revenues:								
Freight	$7,944,864,458	$7,143,826,311	$2,913,554,935	$2,633,052,155	$1,665,156,014	$1,455,443,246	$3,366,153,509	$3,055,330,910
Passenger	812,071,986	734,146,205	415,413,038	388,333,271	125,553,418	109,071,040	271,105,530	236,741,894
Mail	[1]252,282,441	[2]243,037,854	95,283,563	80,151,039	42,237,918	40,923,785	114,760,960	121,963,030
Express	73,480,254	72,276,512	24,118,629	23,483,398	12,197,222	12,370,287	37,164,403	36,422,827
All other operating revenues	405,277,948	351,993,675	181,133,994	156,772,860	69,758,090	57,364,854	154,385,864	137,855,961
Railway operating revenues	9,487,977,087	8,545,280,557	3,629,504,159	3,281,792,723	1,914,902,662	1,675,173,212	3,943,570,266	3,588,314,622
Expenses:								
Maintenance of way and structures	1,364,394,857	1,182,713,630	487,141,229	424,421,108	285,606,517	247,069,979	591,647,111	511,222,543
Depreciation	123,033,146	120,472,180	50,812,842	50,823,114	22,822,159	21,633,239	49,398,145	48,015,827
Retirements	19,262,657	15,170,687	6,037,727	5,930,713	4,793,199	2,667,197	8,431,731	6,572,777
Deferred maintenance	*2,046,980	*1,802,987	*1,543,138	*1,004,159	*497,244	*287,917	*6,598	*510,911
Amortization of defense projects	1,319,600	1,615,946	441,011	184,004	396,239	488,841	482,350	943,101
Equalization	3,091,646	66,052	*353,997	*3,007,806	3,253,158	3,180,487	192,485	*106,629
All other	1,219,734,788	1,047,191,752	431,746,784	371,495,242	254,839,006	219,388,132	533,148,998	456,308,378
Maintenance of equipment	1,816,887,272	1,544,485,265	753,096,096	652,169,988	366,320,843	298,266,460	697,470,333	594,048,817
Depreciation	289,284,823	272,201,404	106,302,890	101,201,800	63,417,762	60,828,644	119,564,171	110,170,960
Retirements	*2,024,237	*679,282	*972,329	*114,274	*565,624	*207,178	*486,284	*357,830
Deferred maintenance and major repairs	*14,322,290	*9,634,534	*14,122,890	*8,819,608	*21,975	*132,407	*177,425	*682,519
Amortization of defense projects	43,823,439	13,127,554	20,262,654	4,848,185	12,545,972	2,559,251	11,014,813	5,720,118
Equalization	557,087	1,628,313	13,758	1,115,909	332,104	620,777	211,225	*108,373
All other	1,499,568,450	1,267,841,810	641,612,013	553,937,976	290,612,604	234,597,373	567,343,833	479,306,461
Traffic	194,023,628	174,776,940	64,694,686	59,129,848	41,055,042	36,586,987	88,273,900	79,060,105
Transportation—Rail line	3,624,005,792	3,163,844,749	1,521,146,698	1,342,324,091	650,060,318	568,764,485	1,452,798,776	1,252,756,173
Miscellaneous operations	114,004,002	100,415,507	39,569,750	35,476,763	17,290,177	14,865,924	57,144,075	50,072,820
General	278,863,397	247,584,527	106,636,662	96,590,178	59,644,994	52,715,315	112,581,741	98,279,034
Railway operating expenses	7,392,178,948	6,413,820,618	2,972,285,121	2,610,111,976	1,419,977,891	1,218,269,150	2,999,915,936	2,585,439,492
Net revenue from railway operations	2,095,798,139	2,131,459,939	657,219,038	671,680,747	494,924,771	456,904,062	943,654,330	1,002,875,130
Railway tax accruals	1,101,000,143	1,041,237,262	327,429,038	316,683,047	284,632,897	243,808,807	488,938,208	480,745,408
Pay-roll taxes	263,050,058	239,487,807	107,341,716	98,636,704	50,350,995	45,099,925	105,357,347	95,751,178
Federal income taxes†	514,967,333	497,920,838	104,546,100	109,777,097	164,477,657	133,228,483	245,943,576	254,915,258
All other taxes	322,982,752	303,828 617	115,541,222	108,269,246	69,804,245	65,480,399	137,637,285	130,078,972
Railway operating income	994,797,996	1,090,222,677	329,790,000	354,997,700	210,291,874	213,095,255	454,716,122	522,129,722
Equipment rents—Dr. balance	146,717,389	129,334,758	65,210,155	62,198,341	*5,046,869	*14,908,348	86,554,103	82,044,765
Joint facility rent—Dr. balance	40,217,664	35,863,167	19,850,114	16,580,225	5,548,110	5,420,680	14,819,440	13,862,262
Net railway operating income	807,862,943	925,024,752	244,729,731	276,219,134	209,790,633	222,582,923	353,342,579	426,222,695
Ratio of expenses to revenues (percent)	77.9	75.1	81.9	79.5	74.2	72.7	76.1	72.1

†Includes income tax, surtax, and excess profit tax.
*Decrease, deficit, or other reverse item.
[1] Includes $29,231,096 additional 1951 Mail Pay resulting from the decision of the Commission in Docket #9200 of Nov. 13, 1951.
[2] Includes the following amounts of additional Mail Pay accrued under the Post Office Dept. stipulation dated Oct. 11, 1950: $31,570,859 for the period Feb. 19, 1947 to Dec. 31, 1949; and $10,270,332 for the period Jan. 1, 1950 to Nov. 30, 1950.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

(*Continued from page* 84)

New Orleans & Lower Coast at Algiers, La., shortly after it became a part of the M.P. In 1944 he was appointed superintendent of the Union Railway of Memphis, an M.P. subsidiary, and in 1947 he became assistant superintendent of the M.P.'s Colorado division at Pueblo, Colo., which position he held until his recent appointment.

C. C. Courtway has been appointed superintendent of the Missouri and Memphis divisions of the MISSOURI PACIFIC at Poplar Bluff, Mo., as previously reported in *Railway Age*. Mr. Courtway entered M.P. service as a telegraph operator in 1912, and subsequently served as car distributor traveling car agent, assistant trainmaster and trainmaster until 1950, when he was promoted from assistant to the general superintendent of transportation to assistant superintendent of the Joplin and White River divisions.

H. A. Rust, trainmaster of the ILLINOIS CENTRAL at Dyersburg, Tenn., has been transferred to Fulton, Ky.

Frank L. Freeman, assistant chief clerk in the general manager's office of the CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC at Chicago, has been appointed assistant to general manager.

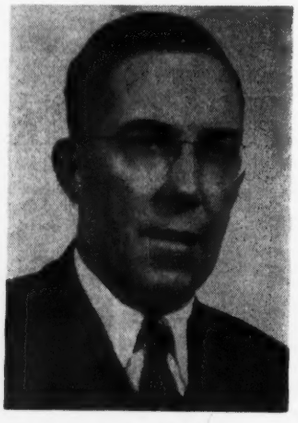
E. W. Hobbs, assistant general superintendent of transportation of the MISSOURI PACIFIC, has been appointed superintendent of safety, with headquarters as before at St. Louis, succeeding **W. H. Bailey,** who has been appointed superintendent of the Omaha and Northern Kansas divisions at Falls City, Neb. **C. C. Matthews** has been appointed trainmaster of the Kingsville division at Harlingen, Tex.

Mr. Bailey entered the service of the M.P. as a telegrapher and subsequently served as train dispatcher and

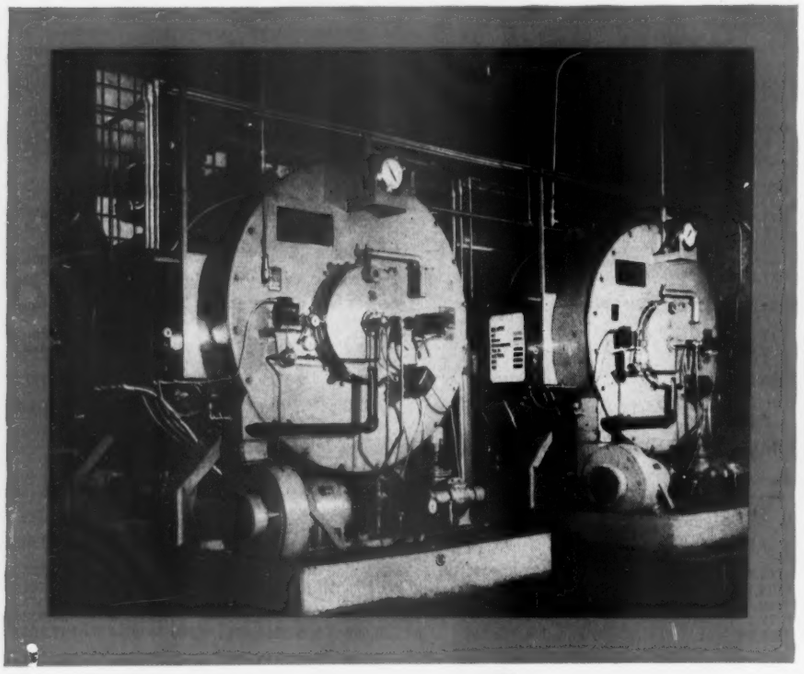
W. H. Bailey

trainmaster. He was superintendent of the Eastern division from 1942 to 1946, when he was appointed superintendent of safety in the general offices at St. Louis.

Carrol E. McEnany, whose appointment as superintendent of the Alamosa division of the DENVER & RIO GRANDE WESTERN was noted in *Railway Age* recently, started with that road in 1920. He held numerous clerical positions at Alamosa, Colo., and Denver until 1929, when he was appointed chief clerk to super-



Carrol E. McEnany



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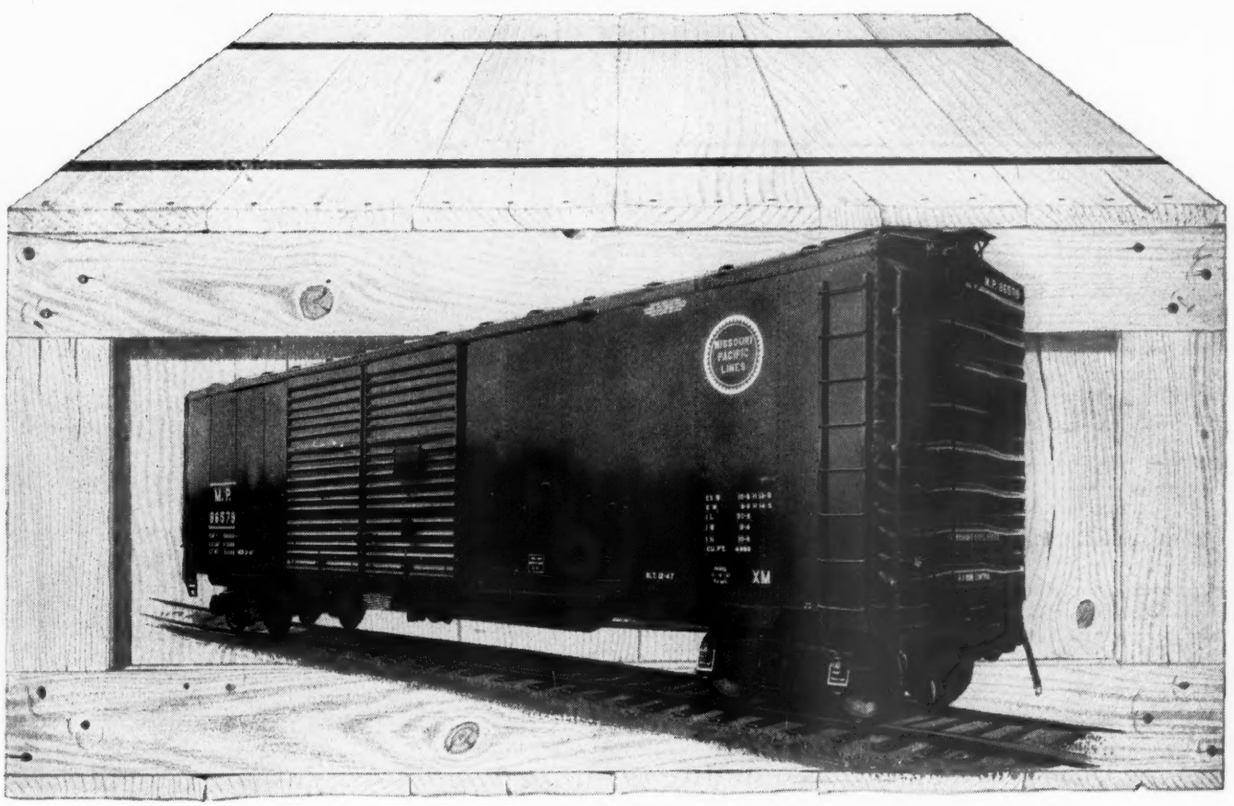

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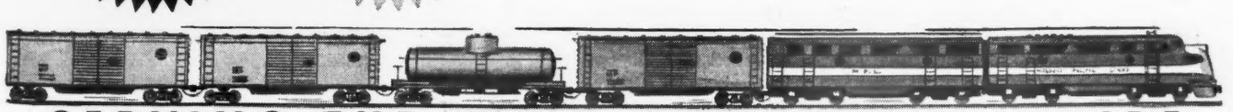

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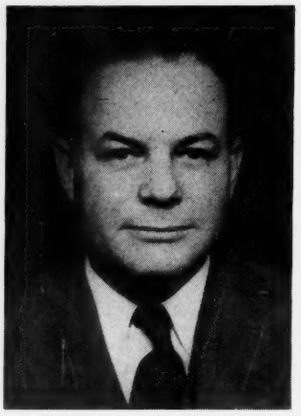
intendent at Alamosa. He was transferred in the same position to Pueblo in 1939, and became assistant trainmaster there in 1944. He was appointed trainmaster in 1945, becoming assistant superintendent—terminal at Pueblo in 1950, from which position he received his recent promotion.

Herbert Morgan, whose appointment as superintendent of the CHICAGO GREAT WESTERN at Oelwein, Iowa, was announced by *Railway Age* December 10, 1951, started his railroad career with the St. Louis Southwestern in 1920. He worked as telegrapher and train dispatcher for several railroads before joining the C.G.W. in 1946 as a train dispatcher.

S. J. Watkins, trainmaster of the AKRON, CANTON & YOUNGSTOWN at Carey, Ohio, has been appointed assistant superintendent at Brittain, Ohio.

G. C. Vaughan has been appointed superintendent of the Panhandle division of the PENNSYLVANIA at Pittsburgh, as announced in *Railway Age* December 31, 1951. Mr. Vaughan was born at Washington, D. C., and entered the service of the Pennsylvania as an assistant on the engineering corps at



G. C. Vaughan

Philadelphia in 1930, following graduation from Lehigh University. In 1946 he was promoted to division engineer of the Williamsport division, later transferring to the Pittsburgh division. He was advanced to assistant superintendent of the Southwestern division on July 1, 1951.

ENGINEERING AND SIGNALING

As reported in *Railway Age* recently, **W. B. Mackenzie,** maintenance bridge engineer of the ST. LOUIS-SAN FRANCISCO, has been appointed bridge engineer, succeeding **R. B. Hennessy,** retired. Mr. Mackenzie entered railroad service in 1916 with a summer survey party for the Intercolonial (now Canadian National). He joined the Frisco in 1922 as an in-

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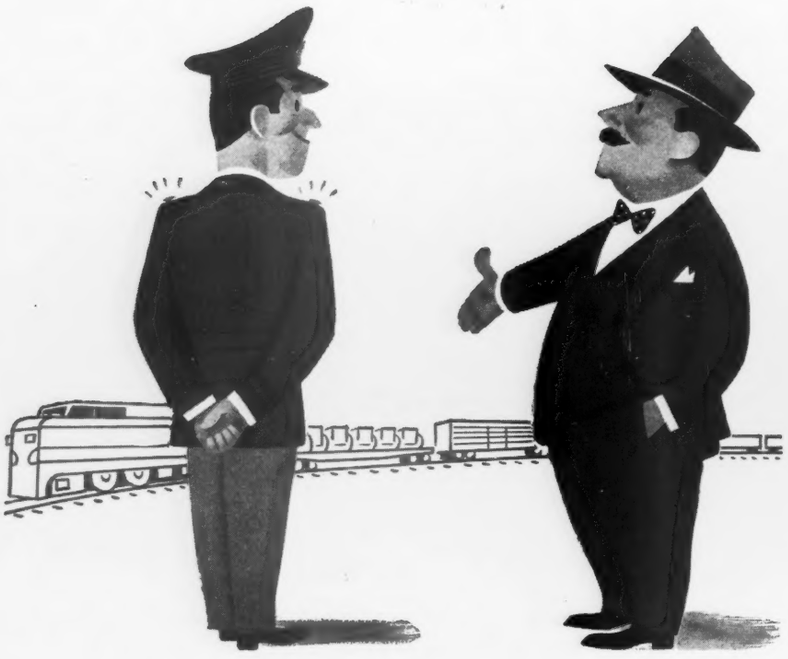

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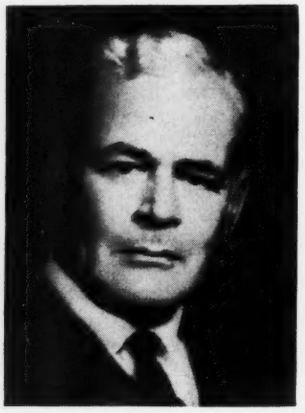
strumentman, and subsequently was bridge draftsman, assistant engineer and assistant bridge engineer. In 1947 he was appointed maintenance bridge engineer.



W. B. Mackenzie

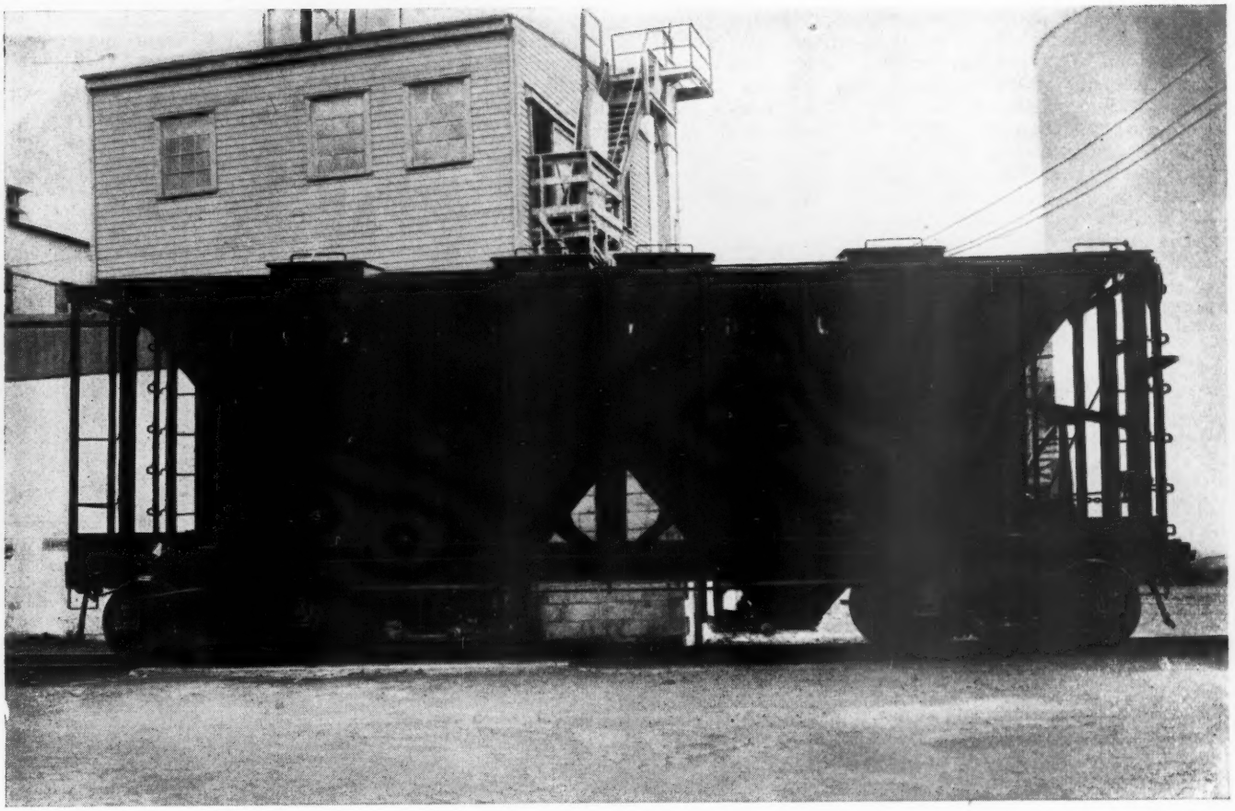
Starting as levelman for the El Paso & Southwestern (now Southern Pacific), in 1907, Mr. Hennessy joined the New Orleans, Texas & Mexico (Gulf Coast Lines) as assistant engineer on bridge construction in 1909. He served in the bridge engineer's office of the Frisco from 1911 until 1918, when he was appointed assistant bridge engineer. He became bridge engineer in 1929.

TRAFFIC

As previously reported in *Railway Age*, **Herbert J. Lobb, Jr.,** has been appointed general freight agent of the READING at Philadelphia. Mr. Lobb was born on July 1, 1909, at Philadelphia and entered railroad service on April 16, 1927, as stenographer in the freight traffic department of the Reading. He subsequently served as clerk, assistant rate clerk, assistant chief clerk, chief clerk to freight traffic manager, chief rate clerk, chief of tariff bureau and chief clerk—freight traffic department. On December 1, 1945, Mr. Lobb was appointed assistant general freight agent.

James P. Donahue, whose appointment as passenger traffic manager of the ILLINOIS TERMINAL was announced by *Railway Age* recently started with the Illinois Traction System, a predecessor of the I.T., in 1923 as clerk in the freight office at St. Louis. He held various clerical positions until 1939, when he was appointed stationmaster and chief ticket clerk at the same point. In 1943 he was named assistant general passenger agent and in 1949 became general passenger agent, which position he held until his recent appointment.

As reported in *Railway Age* last month, **Thomas B. Dwyer** has been appointed general freight agent of the



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NEW YORK, SUSQUEHANNA & WESTERN at Paterson, N. J. Mr. Dwyer was born at Matamoras, Pa., and entered railroad service in 1918 with the Erie, becoming chief clerk at its 149th Street freight station in 1929. He joined the Susquehanna in 1938 as demurrage clerk at Edgewater, N. J., and subsequently served as revision clerk in the accounting department at Paterson, chief revision clerk, and assistant chief clerk. In 1945 Mr. Dwyer became chief clerk in the traffic department at Paterson, which position he held until his recent appointment.

Elmer E. Kester, whose retirement as passenger traffic manager of the ILLINOIS TERMINAL was announced in *Railway Age* recently, is succeeded by **James P. Donahue.** Mr. Kester started his railroad career in 1899 as student operator for the Cincinnati Northern (now New York Central and Pennsylvania) at Castine, Ohio. He served as relief agent and chief clerk, and in 1902 joined the Big Four (N.Y.C.) as assistant cashier at Muncie, Ind. He returned to his former position with the C.N. in 1904, and in 1906 became agent for the Big Four. Mr. Kester joined the I.T. in 1909 as general agent and served in this capacity at Peoria, Ill., and St. Louis until 1919, when he was appointed assis-

Elmer E. Kester

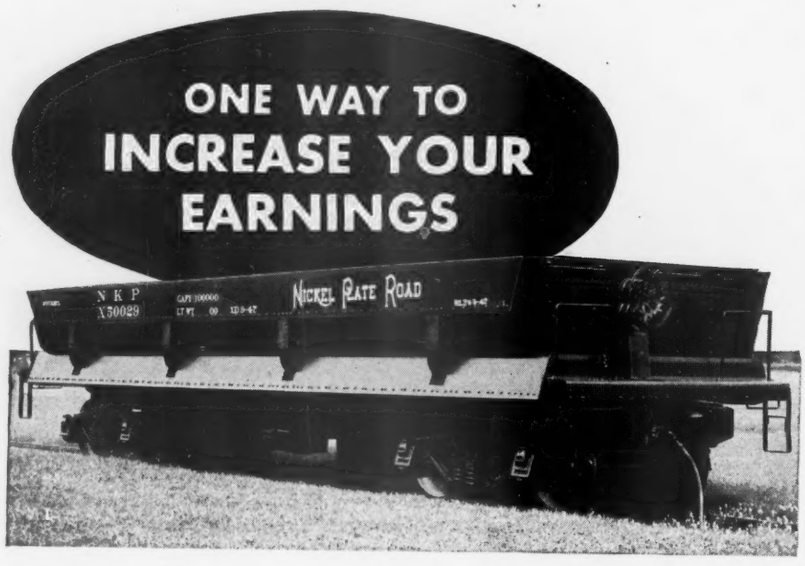
tant traffic manager at Peoria and Springfield, Ill. From 1929 until his retirement he was passenger traffic manager at Springfield.

As reported in *Railway Age* December 31, 1951, **Daniel F. Merriam** has been appointed traffic manager of the NEW YORK, SUSQUEHANNA & WESTERN at Paterson, N. J. Mr. Merriam was born on March 21, 1906, at New York and entered railroad service with the Erie on September 12, 1922, serving

Daniel F. Merriam

as clerk at Jersey City, night yard clerk and clerk at Weehawken, and demurrage clerk, cashier and rate clerk at Edgewater. He joined the Susquehanna on May 1, 1940, as traveling freight agent at New York, becoming assistant general freight agent at Paterson on July 1, 1942, and general freight agent on June 1, 1945.

As previously reported in *Railway Age,* **Harold C. Williams** has been appointed assistant traffic manager of the NEW YORK, SUSQUEHANNA & WESTERN at Paterson, N. J. Mr. Williams was born on September 30,



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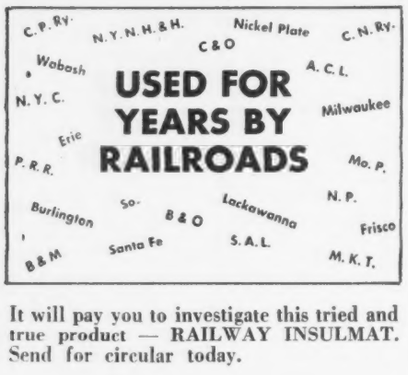

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1906, at Catasauqua, Pa., and, after special studies at Pennsylvania State College, entered railroad service in

Harold C. Williams

August 1924 as assistant statistician with the Lehigh & New England at Bethlehem, Pa. He transferred to the traffic department in March 1926 as tariff and rate clerk and on January 1, 1939, became commercial agent at Bethlehem, which position he held until January 1, when he joined the Susquehanna as assistant traffic manager.

R. M. McBain, assistant general freight agent of the CANADIAN NATIONAL, at Vancouver, has been promoted to assistant freight traffic manager at Winnipeg. He is succeeded at Vancouver by **G. R. Fazackerley,** chief of tariff bureau, at Winnipeg, while **C. A. Wood,** clerk in the freight tariff bureau, succeeds Mr. Fazackerley. **G. N. McMillan,** general freight agent at Winnipeg, has been named general freight agent, (rates) at the same point. He is succeeded by **R. M. Milliken,** division freight agent at Saskatoon, Sask. **H. S. Granger,** district freight agent at Winnipeg, succeeds Mr. Milliken at Saskatoon. **J. S. Stephen,** district passenger agent at Winnipeg, has been appointed general passenger agent there, and is succeeded by **W. E. McCall,** chief clerk, passenger traffic department. **J. R. Scanlan,** district freight agent at Moose Jaw, Sask., has been appointed district freight agent at Winnipeg, being succeeded by **R. I. Vanderstine,** traveling freight agent at Calgary, Alta.

Mr. McBain started his railway career in 1908 as a clerk in the freight traffic department at Winnipeg. After serving as secretary to the general manager, freight solicitor, and freight traffic representative, he was appointed district freight agent at Calgary in 1934. He returned to Winnipeg in 1942 as assistant general freight agent, being transferred to Vancouver in 1947.

Mr. Milliken joined the railway at Winnipeg as freight traffic representative in 1910, and was appointed district freight agent at Brandon, Man., in 1915. He went to Regina, Sask., in 1919 as division freight agent, remaining there for 15 years, after which he was moved to Saskatoon in the same capacity.

Mr. Stephen entered C. N. employ in 1913 as clerk in the audit department at Winnipeg. He served in several clerical positions until 1924, when he became traveling passenger agent, first at Calgary and later at Regina. In 1937 he was promoted to city passenger agent at Saskatoon and in 1946 was moved to Winnipeg as chief clerk in the passenger traffic manager's office. He was promoted to district passenger agent in 1949.

SPECIAL

Geoffrey M. Bruere has been appointed assistant director of research for the CHICAGO & NORTH WESTERN. He was formerly research assistant.

J. R. Russell, assistant to manager of personnel of the SOUTHERN PACIFIC LINES IN TEXAS AND LOUISIANA, has been appointed assistant manager of personnel at Houston, Tex.

Clyde D. Carder has been appointed editor of a new magazine for employees to be published by the PENNSYLVANIA, beginning in the near future. Mr. Carder, who has resumed his new duties at Philadelphia, was formerly editorial coordinator of employee publications for the General Electric Company at New York.

John T. Williamson, whose retirement as director of personnel of the CHICAGO, BURLINGTON & QUINCY was announced recently by *Railway Age*, started with the Burlington in 1900 as messenger. He subsequently served as ticket seller, tourist agent, station passenger agent and traveling passenger agent. He joined the relief department in 1920 and became superintendent there as well as chairman, board of pensions, in 1924. In 1933 he was appointed also superintendent, employment department, working in these three capacities until 1943, when he was named director of personnel.

OBITUARY

Walter H. Johnson, 62, treasurer of the RAILWAY EXPRESS AGENCY at New York, died on January 27 at Lawrence Hospital, Bronxville, N. Y. Mr. Johnson was born at New York and began his express career there on February 9, 1907, as a clerk in the accounting department of Wells Fargo & Co., a predecessor of R.E.A. He held various accounting jobs during the next decade, including that of foreign correspondent at New York and Chicago. Returning to New York in August 1917, Mr. Johnson entered the treasury department as chief clerk and became assistant to treasurer of R.E.A. on October 16, 1928. He was appointed treasurer in January 1950.